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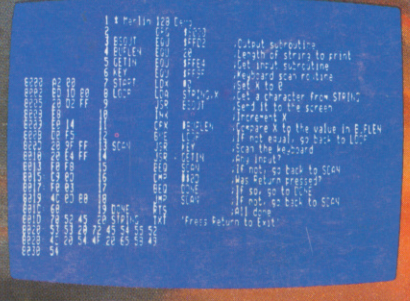

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Due to significantly increased costs, it has been unfortunately necessary to raise the price of CCI by 10p from this month.

Dear Reader

First a little Commodore history — 1976 — Commodore once a calculator company, buys three chip making firms; 1977 — the first PC, Commodore's Personal Electronic Transactor — The famous PET(6502 processor, 8kb of RAM); 1980 — the 3000, 4000 and 8000 series (up to 32kb of RAM); 1981 — The Commodore "People's Computer" — The Vic 20; 1982 — The 64, more than 8 million sold worldwide; 1985 — The compatible PCs, PC10, PC20 — Made in Germany; 1986 — The Amiga, the first of the "next generation" computers; 1987 — the Amiga 500, the first home computer with multitasking; 1988 — the Super Commodore PC 60/80, 80386 microprocessor, 80 megabyte hard disk...The PCs 10/3 and 20/3...The MPS 1250 Colour printer...The 2024 hi-res monochrome monitor 1008x1024 pixels...The Unix Amiga...The Amiga Transputer, 10mips (10 million instructions per second).

Is this the whole story? And what's all this 1988 stuff? That isn't history yet! Oh yes it is — at least in Hannover in West Germany.

That was not CCI but "Official CBM History" and, up to the 1988 part, it was writ large in a place of honour on one wall of the massive Commodore stand at C-Bit, the largest computer show in Europe, probably the world and possibly the universe. This 1988 year's story was announced at the Show.

There are, of course, one or two interesting gaps in CBM's mini-chronicle. Whatever happened to the Plus/4 and C16 for instance? Not all historical episodes are glorious...Anyway little failures don't fit with C-Bit.23 Halls, each of enormous size with everything from CADCAM to computer games, it draws, including exhibitors, around 450,000 people from all over the world, including Commodore, of course. The "of course" is because in West Germany, CBM is the Marktführer — the top-dog, the market leader and the powerhouse that today drives Commodore worldwide.

In Germany, in selling PCs, it challenges IBM. In the home computer market, CBM Germany sells more than 75% of all computers. There are supposedly 1 million active 64's and 150,000 Amigas, with nearly a quarter of a million Commodore computers sold in the last six months alone.

No wonder CBM chose its football field size, double-decker stand at C-Bit to announce those 1988 developments.

Yes, there are to be new Amigas — the 2500, the 3000, the Unix, even the Transputer Amiga; all high level machines increasing the range and with power to spare.

The 2500 will be AT compatible or with the high speed Intel 80286 technology. More importantly, the Amiga part will be upgraded to the 68020, running faster and with an enhanced chip set.

The new Amiga 3000 is even more powerful using the Motorola 68030 with multiple drives, networking. It is capable of addressing 2 gigabytes of memory. Real heavy power that and a long, long way from the ancient PET's 8K.

All these machines have the important advantage of remaining compatible with the present Amiga 2000 which means that computer can be upgraded to benefit from all that new capability. And, on top of these Amiga developments, CBM announced some new, more powerful PCs too.

All this big business stuff may not seem to mean much for the average 64 owner, though even that computer, CBM was announcing, had sold over 1 million in the last 12 months. But the real significance is that Commodore is building back a very strong base for all its machines which will reinforce industry confidence and encourage increased amounts of improved software for all Commodore computers even the 64. Well, sorry excepting those unmentionables in Germany the Plus/4 and C16...

Power...That was the keynote for CBM in Hannover. More power computers, more power for CBM computer users and the most powerful performance from Commodore in years.

As I sat waiting for the plane to take off from Hannover to return to London, the pilot announced that the airport computer had failed and all flights were delayed indefinitely. With a planeful of computer people, how embarassing for "German Efficiency" — Vorschprung durch Technik and all that...Oh well, perhaps even the Germans could use still more of that Commodore power...

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Managing Editor and Publisher

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PSS Sorcerer Lord

PSS are releasing Sorcerer Lord — a solo fantasy war-game simulating the ancient lands of Galanor by the evil sorcerer ruler of the Northern Shadowlands. As well as being a large scale strategy game involving the manipulation and control of a large number of units, magic and sorcery play a major part.

Features include a phased game, strategic and tactical map displays, highly intelligent computer opponent, hidden movement, 3 difficulty levels.

C64: £12.99 (c), £17.55 (d).

And Rack It's Herobotix

A new Hewson/Mastertronic release, Subterranea has an initial five ships at your disposal. You must infiltrate 16 caverns of increasing difficulty. At the end of each cavern is a mass of flashing amoeba guards protecting a mother module. Invade the defence ameoba to zzap dead the mother module and earn an extra ship. Slowly and carefully you feel your way through the caverns — shooting at floating and darting alien bubbles and obstacles and temporarily de-activating the lazer gates control boxes.

SUBTERRANEA — shoot-em-up on Rack It Label for the Commodore 64 £2.99

Martech's Vixen

Martech are doing a Barbarian. Not copying the game but using a Page 3 girl as an illustration. She is Vixen, the Foxy Lady of Granath.

The planet Granath has been under siege for as long as the sky has met with the horizon, and for as long as the mountains have rolled into the distance.

For Granath, a world in a parallel universe many eons away, has been at the mercy of the dinosaurs. For millions of years they roamed the planet's surface and its massive underground caves in search of their prey. They have destroyed all but a few of the mammals, and all of the humans.

Or have they?

For the powerful lone female figure still stalks and battles with the reptiles. Yes you've guessed it, it is Martech's Foxy Page 3 Lady.

Our lone heroine, Vixen, complete with tiger-skin bikini was raised by the wiley foxes, and has the magic powers bestowed on her by the Fox Sages. With her ability to metamorphosize into a fox and her Magic Whip in hand, she is fierce, brave and a match for any of her foes. Magic whip? Will this get an 18 certificate?

Martech tell us Vixen is a state-of-the-art sideways scrolling arcade game of classic proportions, 'which puts our heroine and her whip (ouch!) up against masses of nasties all of weird proportions and persuasions.

The animation of Vixen and her Fox Double has been video digitised from the real thing. (Now that sounds interesting). You have to make the Foxy Lady play to win, as in this world there is no second best. (Well not unless you prefer Marie Whittaker...)

Vixen will be released at April. 9.99 on C64 and (C64 disk £14.00) with Amiga selling at £19.99.

Vixen Hotline: 0323 766616 (and we have no idea what that is for and haven't had the courage to ring and find out! Remember the whip!)

Juggler 128

A new product for the Commodore C-128 personal computer has been launched in Canada — Jugg'ler — 128. Written by M. Garamszeghy, a CCI contribution. This program provides read, write, and formatting support for more than 130 types of MFM CP/M disks on the C-128 in CP/M mode with a 1570, 1571, or 1581 disk drive.

It is compatible with all current versions of C-128 CP/M, and all C-128 hardware configurations, including the 128-D. Once installed, the support for the extra disk types is automatic by CP/M and all normal CP/M file access commands can be used with the new disk types.

Jugg'ler-128 is an easy to use program for the Commodore C-128 (in CP/M mode) which provides read, write and formatting support for more than 130 types of MFM CP/M disks. The program features: It has menu screens for selecting and installing disk types, and formatting new disks; user definable set of up to three default disk types which can be automatically installed during a cold boot up; support under all versions of C-128 CP/M and for 1570, 1571 and 1581 disk drives and the C-128-D; total support by C-128 CP/M DOS commands for the extra disk types (once installed) without the need for special programming; the ability to analyse an unknown CP/M disk type and report possible matches from its internal database of disk type; a convenient built in "back up" option for making copies of the program and data files (on any drive connected to the system, including the RAM disk driveM:) without the need for extra file copying programs and other facilities.

Jugg'ler-128 is not copy protected. It is available at a cost of £19.95 (CDN) or £17.95 (US) by mail order from: Transactor Publishing Inc., 85 West Wilmot Street, Unit 10, Richmond Hill, Ontario, Canada L4B 1K7. Tel: (416) 764-5273.

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E.A.'s cassette's plus a strategy

Electronic Arts has announced the Commodore cassette release of four of its programs, for cassette. They are P.H.M. Pegasus Chuck Yeager's Advanced Flight Trainer, The Berd's Tole and The Berd's Tole II — The Destroy Knight.

All will be for the C64 and cost £9.95 each.

E.A. has also announced a new title: Patton vs Rommel, a strategy battle simulation on disk for the C64 at £14.95

The Time: D-Day, 1944. The Place: Normandy, France. Your Mission: become either General George "Blood and Guts" Patton, Commander of the American Forces or Field Marshall Erwin "Desert Fox" Rommel, Commander of the German Seventh Army. Two of the greatest generals in modern history destined to meet in a battle for the future of Europe.

As commander-in-chief, players have numerous divisions (infantry and armour) at their disposal and an historically and geographically accurate map of 150,000 locations to follow.

There are 10 different tactical orders, and each division can have up to 32 different orders at a time. To give their orders, commanders merely point at a division and an objective, and the army does the rest. As the strategies come to life, players watch orders explode into battles, hear armies clash with sound effects. And the generals appear on screen to tell players what they think of their tactics.

Bytes and Pieces are also selling a War Strategy Game for the 128 in 128 mode and needing a 1571/1581 drive as the disk is crammed full with this game. It is said to offer at least 60 hours play time with maps, troup movements etc., over the whole of Europe and the Middle East during 1914 to 1918. Play the computer, two up or swap sides. Save during play and just released in the States. THE GREAT WAR will sell for £14.95.

Dataphone launches low cost modem

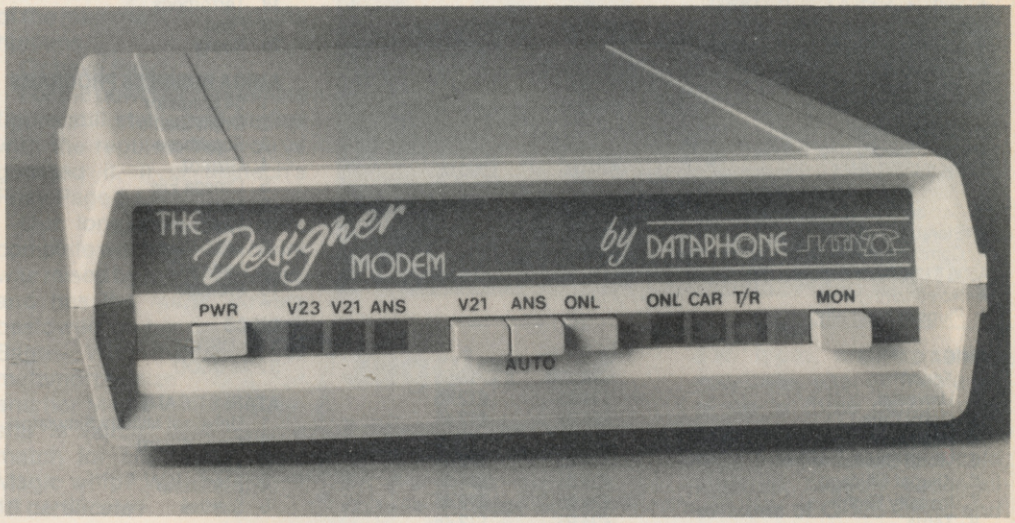
Modem specialist Dataphone has just launched a new advanced model called the Designer. Based on the best-selling Demon II but with a number of additional features the Designer will still sell for less than £100.

Like the Demon II, the Designer has full BABT approval, full computer control, auto dial from the keyboard or directory, and an auto-answer facility for unattended operation. Both modems will handle 1200/75 and 300/300 baud rates as well as 1200/1200 half duplex for bulk uploading and both can automatically select the correct baud rate for either sending or receiving. Additional features on the Designer include over-ride buttons for use with manual software, a call progress monitor which allows users to hear what is happening on the line, and a telephone socket on the rear which permits a telephone to be connected in parallel.

Both the Designer and the Demon II can be used with any computer which has a suitable interface and software and is provided with a 25 pin D socket for connection to a computer RS232/423 port. Both have a full three wire telephone circuit (so they will not 'tinkle' the bells of extension telephones on the same circuit) and come complete with a built-in power supply, fitted mains plug, and a three metre telephone cable which connects to standard sockets.

A mains on/off switch is built onto the front panel of both the Designer and Demon II, allowing the modems to be powered up independently of the computer so they do not occupy the telephone line unnecessarily. The front panels include six LEDs which show speed, line and computer status.

Contact: Dataphone Ltd, 22 Alfric Square, Woodston, Peterborough PE2 0JP. Tel: (0733) 230240.



Dataphone's Designer modem.

Action's Orator Price Cut

Action has reduced the unit price of the Orator voice and data PC communications package to £595.00, brining it to £200.00 below the current suggested retail price, with a further reduction to £549.00 for orders for two units or more.

By simply plugging "The Orator into a slot in your PC you transform your systems into a versatile, multi-function communications centre which handles both voice and data. In fact, the Orator provides facilities that would otherwise require half-a-dozen different devices" says Action.

The Orator offers four major functions. First, it can automatically call up the full range of data services, electronic mail and other computers, effectively providing four modems — V21, V23, V22 and V22 bis. Secondly, Orator can emulate three terminal types — TTY, VT100 and Viewdata — so that the PC can act as an on-line mainframe terminal or as a Prestel screen. Thirdly, it can answer the telephone with a range of pre-set greetings, and store both voice and data messages digitally to be replayed locally or remotely.

Fourthly, it can be programmed to send, receive and store datafiles, mail and messages (text or voice), unattended at any time of day or night. Orator will work with the IBM PC or true compatibles, and requires DO32 or DOS3, and 256K RAM. It simply plugs into a PC slot, and the telephone line then plugs into the Orator.

Contact Action: 0800 333 333.

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SuperScript gives you everything you need for professional word processing in one easy to use package. Its menu command structure puts you immediately at ease, with no complicated commands to memorise, yet SuperScript combines business-style editing, spell checking, calculator, row and column arithmetic and full mail merge facilities. The phrase glossary feature enables you to store whole passages of text, or command sequences and recall them with a simple key.

Commodore 64 disk **£24.95**
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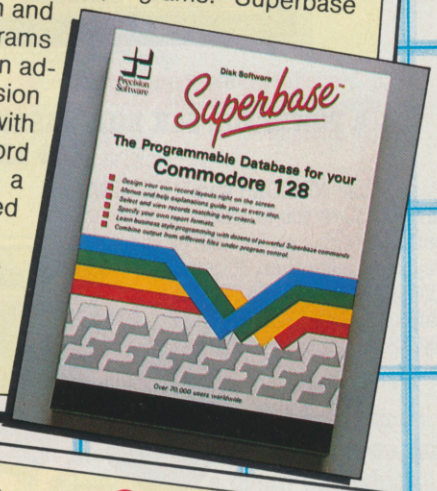

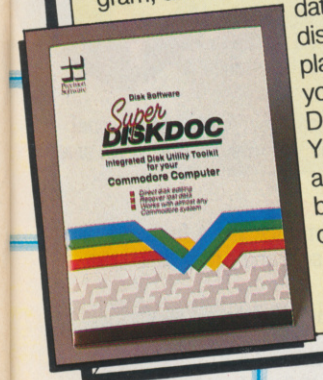

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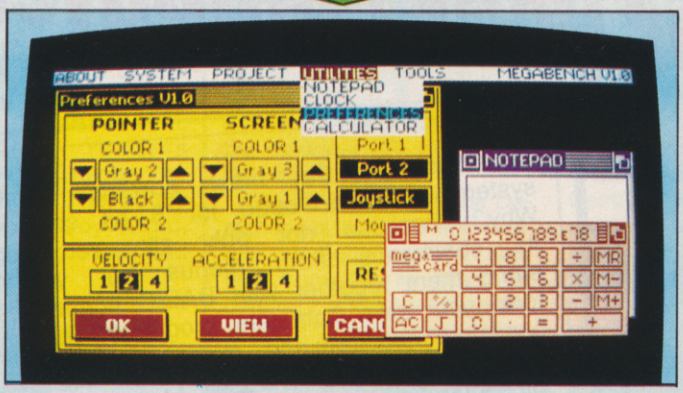

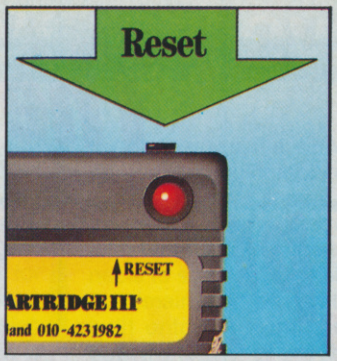

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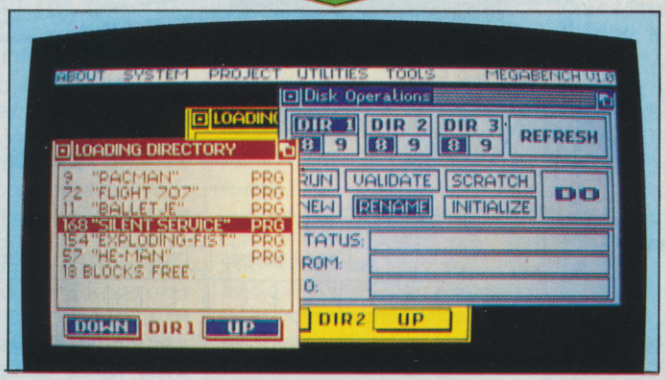
WINDOWS



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The high-resolution bit mapped windows are selected from a menu bar. An unlimited number of windows can be open on the screen at the time. The windows can be freely moved on the screen.

The following windows are already implemented in ROM:

PREFERENCE WINDOW
Selects: mouse port, joystick port, mouse speed, screen colours, pointer clours, keyboard click, keyboard repeat.

CALCULATOR
Complete simulation of a LCD-calculator. Input either with mouse, joystick or keyboard. The numeric key-pad of the C128 can be used in C64-mode.

NOTE PAD
Easy to use wordprocessor with proportional characters enables you to store and print small notes, letters, etc.

DIRECTORY WINDOWS
Enables you to open directories from different disks and drives, sort and print directories.

DISK WINDOWS
Load, Run, Rename, Validate, Scratch, Initialize, Fast format disks.

TAPE WINDOW
Activates fast and normal modes.

PRINTER WINDOWS
Select different printers, such as Commodore serial, Centronics, RS 232, Colour printers.

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DISC BASED USER WINDOWS

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Real Time Clock, with Alarm.

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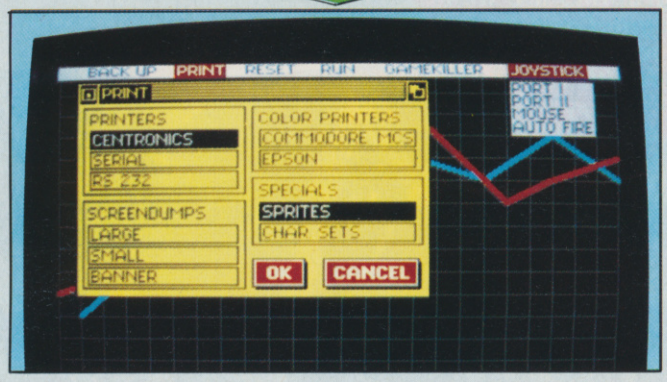

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Innovative hardware, combined with smart software, allow you to freeze and continue every well-known C64-program.

Freezer options include:

CENTRONICS/SERIAL/RS 232 SCREENDUMPS

● Full A4 printing ● Variable printsize ● Colour printing ● Sprite printing ● Reverse printing ● Colour changes.

GAMEKILLER

● Kills sprite to sprite ● and/or sprite to background collision ● Can be started at any point in your game.

AUTO FIRE

● Transforms a normal joystick to an advanced auto fire engine.

JOYSTICK PORT CHANGER

● Never blow up your computer again by changing joystick ports while the C64 is running.

BACK UPS

● Disk to disk ● Tape to disk ● Disk to tape ● Back up files are packed and reloadable without the Final Cartridge III ● 60K in 15 sec. (disk) ● Exits to Monitor or Basic.

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Comfortable ML monitor.
Does not reside in memory.
Functions include:
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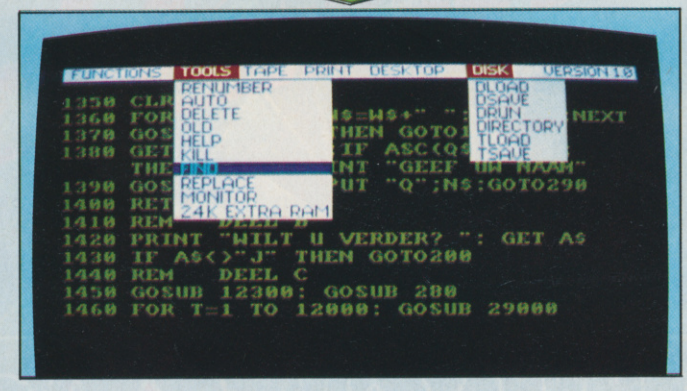
PULL DOWN MENU



THE FINAL CARTRIDGE III®

Almost all commands and functions that are not activated by windows can be selected from a menu bar, which appears on top of the screen after pressing the fire button, either in Basic or from the freezer. The following Basic Toolkit and keyboard extra's are included:

● Renumber ● Auto ● Delete ● Old ● Help ● Kill ● Find ● Replace ● 24K extra RAM for Basic ● Append ● DAppend ● DSave ● DOS ● Monitor ● Drive monitor ● Sprite editing ● Centronics interface ● Fast format ● Low Res screen-dumps ● Plist ● Scrolling up and down ● Stops and continues listings ● Pro-grammed functionkeys ● Packer/Cruncher ● Hex to decimal conversion ● Pokes, syscalls and variables may all have Hexadecimal values ● Trace, Dump, Order, Mem.

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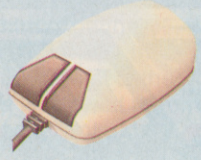

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Mirrorsoft's File Rescue Plus

The days when a damaged disk or deleted file meant the loss of valuable data are finally over, Mirrorsoft claims, with the launch of its File Rescue Plus. It is an easy-to-use utility package which can both rescue data from damaged floppy disks and recover deleted files.

Consumer tests have shown that text and data files can be rescued successfully from floppy disks which have been stapled, folded, burned with cigarettes, or even soaked with coffee.

This ability to work with severely damaged and non-DOS format disks — for example from dedicated word processing systems — distinguishes File Rescue Plus from other utilities.

With a recommended retail price of £24.99 including VAT, the package is designed both for new and experienced PC users; it employs plain English commands, does not require a detailed knowledge of understanding of DOS, and includes context-sensitive help screens for each section of the program.

Facilities for advanced users include the option of simultaneous display of any file in ASCII and hex; disks can also be examined sector-by-sector.

Files containing confidential information can be "shredded" to prevent recovery, and other operations include file and directory management, with the ability to sort by filename and/or extension, date/-time and size.

Contact: Mirrorsoft 01-377 4837.

New Prestel Database

A new database has been launched on Prestel. Called 'Musicfocus', it comprises over 200 pages of information and entertainment in the fields of popular music and radio and is part of Prestel's ambitious plans to increase the appeal of the service to individual subscribers.

Amongst the features are a Gig Guide, consisting of nearly 40 pages of latest information on concerts and tours by well known artists; some fifty pages of single and album reviews; and a substantial Professional Section listing addresses and phone numbers of radio stations and record companies.

A feature entitled 'Fan Line' provides a forum for music fans to swap information and chat with each offer by means of an open bulletin board area, and a regular quiz (currently on the theme of music from the sixties) provides an opportunity for users to win valuable prizes. The chart section includes, along with a highly accurate top selling singles listing, the innovative 'Radio Airplay Chart' with placings determined by the frequency of broadcast, rather than by sales figures. The news pages feature leading stories from both the music and radio worlds.

Whilst some sections of Musicfocus are on chargeable frames (1p or 2p mostly), there are many areas that are completely free of such charges. Musicfocus Editor, Rob Randall, himself a radio DJ (on Guildford's County Sound) says that the database 'aims to offer a similar fare to the best music and radio publications, consumer or professional, with the added bonus of electronic immediacy.'

Musicfocus is on page 3450 and can be reached either by directly keying *3450# from any page, or by selecting the appropriate option on the main Focus page. Using the new keyword facility, it can also by accessed by keying *MUSICFOCUS#, or even simply *MF#.

Venom strikes back from Gremlin

Venom have kidnapped Scott Tracker, Matt's son, and are holding him hostage in their moon H.Q. Miles Mayhem demands the surrender of MASK in return for Scott's life. Unable to agree to this, Matt sets out alone to rescue Scott. Unfortunately none of the MASK vehicles are capable of space travel, so Matt must penetrate Venom's Earth stronghold and steal a moon rocket, even though this will alert Venom to his rescue plan.

You have the option of collecting various masks to give you extra power along the way. Having made your way to the VENOM base, you must enter it and destroy as much of it as possible, in order to get the rocket to the moon, you'll have to collect fuel from various locations throughout the stronghold.

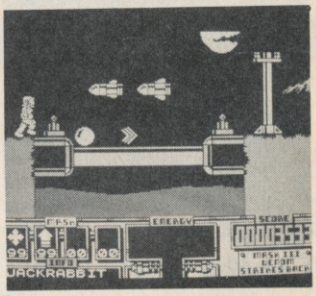
Your next battle is with the VENOM agents guarding the rocket. You must overcome each and every one of them to secure your control of the spacecraft.

Firebird's Black Lamp

Black Lamp, an arcade game has been designed by Graham (Kenny) Everett and Steve Cain of Star Trek fame and programmed by Software Creations. Jack the Jester battles his way through numerous scenes. With detailed backdrops fast animation. Gameplay takes place in the Kingdom and Allegoria where the reward for success is the hand of a princess and the price of failure is death.

As Jolly Jack the Jester you must fight a host of beautifully animated animals and characters including skull dropping buzzards, evil eagles and spitting witches in your quest to find the enchanted lamps and ultimately the black lamp guarded by a dangerous dragon.

Black Lamp will be Commodore 64 at £8.95 cassette and £14.95 disk



Having landed there, you must next penetrate the VENOM defences on the moon's surface and then seek out Miles Mayhem. One last battle with him must be won in order to achieve the safe return of Scott.

The multi-level space adventure is on Commodore 64/128K (cass) £9.99, (disk) £14.99.

In search of the Yeti

Destiny Software are running a competition, in connection with their first release, Yeti, in which the lucky winner could receive £30,000.

The competition has been organised around a Himalayan expedition in search of the Yeti, which ingeniously coincides with the launch of the game. Led by Chris Bonington, the expedition will commence in March and follows a recent Russian search which came or so it is claimed, within 30 yards of the elusive Yeti. Chris Bonington himself is certain the expedition will be successful.

Despite evidence that the Yeti exists and that this expedition is probably the most comprehensive yet, William Hill are offering staggeringly high odds of 150-1 against success. If William Hill are proved wrong, Destiny will cash a £200 betting slip and give the winnings away.

All that entrants need to do to be considered, is to send a postcard to Destiny Software at Lamerton House, 23 High Street, Ealing, London W5 5DF with a maximum of 50 words on the back describing what they think the Yeti will look like. The best description wins.

Commenting Chris Bonington said "I am convinced the Yeti does exist and is not some kind of large primate but a completely new species."

Destiny boss Francis Lee added, "The idea of the Yeti represents beauty, mystery and romance together with that hint of danger . . . if it is found then I hope that, once filmed for the rest of the world to see, it is allowed to remain free as nature intended."

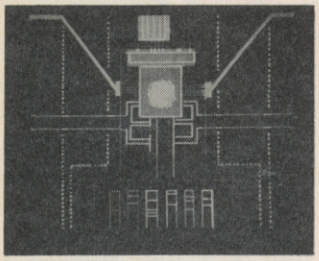
The game will be available for Commodore at £9.95.

Cybernoid — The Fighting Machine comes to you!

"Stunning visuals, fast moving blast appeal and tip-top tuned-up gameplay are the classic ingredients of Cybernoid — The Fighting Machine," is how top software house Hewson describes its next release.

Featuring a space battle fighter which accumulates a massive arsenal of internal add-on weapons, to form a spectacular Fighting Machine, Cybernoid is the latest in a long line of shoot-em-ups from one of Britian's premier computer games houses.

Written by top author Raffaele Cecco, creator of hit Exolon, Cybernoid. Commodore 64 cassette and disk price — £9.99 and £14.99.



Delta for RAM

RAM Electronics have announced the latest addition to their product range — the DELTA joystick. The DELTA joystick, they tell us, has a smooth, accurate action. It costs £9.99

Six precision micro-switches are incorporated within the DELTA which has been designed with built-in reliability as a high priority. The DELTA joystick comes with a two year guarantee to endorse their faith in the project. There are two fire buttons plus Auto-Fire which is an essential feature for the demanding games player these days. Its unusual 'delta' shape also allows for either tabletop or hand held games playing.

Contact: 0252 850085/31.

First Stage Infosearch

Following the launch of the ISTEL Infosearch service in December, 1987, the total initial allocation of 500 user passwords has been fully subscribed, three months earlier than planned.

Infosearch is a new information service which allows access to over 1,000 information databases, held on computers across the western world. Access is by a local telephone call to one of the access points on Infotrac, ISTEL's data communications network.

The overwhelming response to the launch offer has staggered the marketing team. "We expected that it would take until the end of April to sign-up 500 subscribers," reports Infosearch manager, Chris Rodwell. "In fact, it only took one month. We expect to be able to organise additional resources to take on the next 500 users in a few weeks. In the meantime, new users may have to wait for their access codes.

Almost 1,000 databases are accessible via the service. The databases are held on host computers all over the world. The searcher only has to dial locally into the ISTEL network to take advantage of the service, and doesn't even need to know where the information he requires is held.

Karnov — The Fire Breathing Russian!

Data East's fast 'n' furious arcade classic KARNOV, is now to offer on Commodore 64.

The game's programmers, Mr Micro, have modified new sprite designing tools.

The conversions are claimed to stay faithful to the original game, retaining 95% of all features. Karnov must run, swim and fly if he is to find the lost treasures of Babylon. Ladders, 'superboots', flippers and wings will need to be collected on the way. Included in the game's 40 odd monsters are dinosaurs, skeletons riding ostriches, Genies on flying carpets of fire, and a terrible 2-headed dragon. There are nine levels and dozens of route combinations. Vodka loving Amanda Berry says it is a game to be reckoned with.

Commodore £9.99/14.99

British Library's Document Delivery Study

The British Library and the University of Bradford are to collaborate on the Docmatch-2 project. This is the trial implementation of the software proposed by the earlier Docmatch-1 project which set out to simplify and speed up the electronic ordering and delivery of documents using the Universal Standard Book Code, a unique identifier for bibliographic records. Other document identifiers including the ADONIS identifier will also be tested.

This new study will allow practical demonstrations of these identifiers and address the problem of matching bibliographic records stored in one place and the full texts stored elsewhere. This is a problem which concerns document supply centres, database hosts and publishers.

In the trials at the British Library Document Supply Centre the software will be linked to the experimental ADONIS document supply workstation which at present stores the full text of over 200 journals in electronic form. It is hoped that other European centres will take part in tests of the software developed in the project. The project is funded by the Commission of the European Communities, Directorate General Telecommunications, Information Industries and Innovation and starts in early 1988 and lasts for 2 years.

Information on Docmatch-2 is available from David Millson, The British Library Document Supply Centre, Boston Spa, West Yorkshire LS23 7BQ. Tel: 0937 546085.

Verminator from Rainbird

Strike it rich with Verminator, the latest technicolour "masterpiece" from Rainbird Software (that's how Rainbird spell it!).

Set within the trunk of an ancient oak tree — consisting of over 250 colourful locations from top to bottom — you have been employed by the Tree Council to rid the oak of a strange and horrifying influx of vermin. This is your chance to make some dough. Every wriggler and flying nasty which you manage to zap, boing on the head or knock out with a flying brick will earn you extra cash.

Stop off at the shop to buy new and more sophisticated pieces of equipment, as they will be needed in the higher reaches of the tree. Other options are open if you need the cash urgently, the bank is always open, the casino is good for a gamble and there's always the Mob in an emergency. Beware the latter, The Management turn urgly should you fail to cough up the extortionate repayments on the nail and will send out the heavies to beat you up and your hard earned equipment to smithereens.

The Verminator skurries around on his three legs (very nasty!), down to the dark, murky bowels of the three where the roots harbour bug-eyed aliens with very sharp teeth, to the lighter and airier branches at the top where creatures of very different character will be found.

Verminator will be released at £24.95 for the Amiga.

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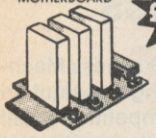

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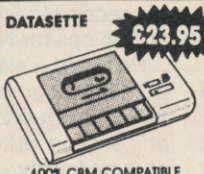

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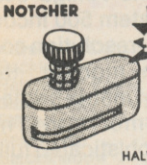

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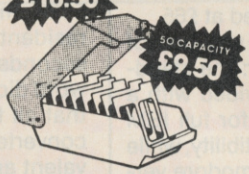

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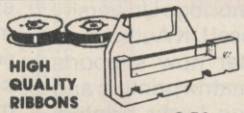

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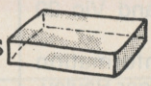

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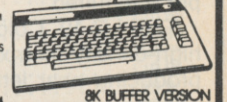

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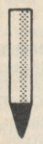

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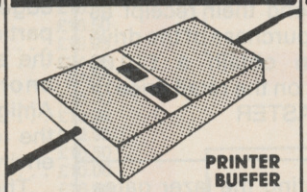

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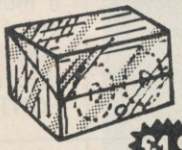

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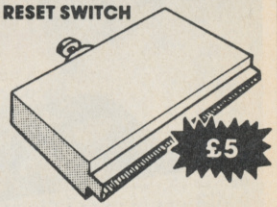

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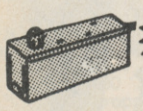

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Star's New LC-10 Colour

Star Micronics has announced a price of £259 for its new LC-10 Colour dot matrix printer. With seven colour printing, a high-density matrix and eight resident fonts, this makes its latest product, Star claims, "the best value colour printer on the market".

The new LC-10 Colour printer, a direct descendent of the successful NL-10, offers features, Star says, that would normally be found only on printers costing twice the price.

Star has also kept running costs low by pricing the replacement colour ribbon at just £6 and by allowing the use of the standard LC-10 black ribbon (which costs only £4), for when only normal text output is required.

The LC-10 Colour has a high-density matrix (23 x 18) producing near letter quality (NLQ) print that belies the fact that it is a 9-pin machine. The printing speed is 44 characters per second (cps) for draft Elite and 36 cps for NLQ Elite.

Provided a standard on the LC-10 Colour is a push feed tractor, with short form tear-off, and an automatic paper parking facility which obviates the need to remove continuous stationery to use single sheets. There is also the option of a low cost automatic cut sheet feeder, priced at £65.

There are two versions of the LC-10 Colour: the standard model is provided with a parallel interface for full IBM and Epson compatibility, while a dedicated Commodore version (LC-10C Colour) has a special interface for the Commodore 64, 128 and Vic 20 computes.

For further information please contact: Roger Bayley, National Sales and Marketing Manager, Star Micronics U.K. Limited. Tel: 01-840 1800 or Chris Wilson, Harvard Marketing Services, Tel: 01-759 0005.

Fontmaster Developments

The SPELLCHECKER unavailable at the time of the review is now bundled with each program. With a 1571 it takes 45 seconds to check a two page document. With a 1581 drive it takes 25 seconds and with the program, fonts and spell-checker in memory when the 512K memory expansion is resident, it takes just two seconds! That is on a 102,000 word dictionary. The secret is that all the words have been converted to their binary equivalent and thus the checking is so much faster.

FONTMASTER is being used at Cambridge University and some local UK Authorities.

Fontmaster now supports 24 pin dot matrix printers and the following Laser printers — HP Laser Jet, Okidata Laser Line 6, Centronics PP8, Epson GQ3500, Star Micronics Laser 8.

We are now making a special offer to all those 128 owners who buy a 1581 3.5 inch drive. If they send their receipt as proof of purchase of the drive they can obtain a £10.00 discount on the retail price of FONTMASTER

CBM's Amiga for small business

Commodore Business Machines is mounting a assault on the highly competitive small business market with the launch of an Amiga powerful system specifically configured for this demanding market.

Based on the Amiga 500, the Amgia System 500 incorporates a high-resolution colour or mono monitor, the MPS 1200P dot matrix printer, PC Transformer and The Works — A sophisticated fully integrated software package consisting of word processing, spreadsheet and database modules. Amiga System 500 sells at £699 + VAT with the colour monitor or £599 for mono, representing a powerful small business package in terms of price/performance.

CBM's UK Sales Director Jim Housego claims that the inclusion of PC Transformer with the package gives the Amiga System 500 a unique edge: "We believe that it is particularly important to offer the small business user the enormous capabilities of Amiga DOS without shutting the door on the MS-DOS environment".

The Amiga 500's power and unrivalled graphics capabilities have already earned it a dominating position in TV and video production, education and computer-aided design — for architects, graphic designers and fabric designers — scientific, medical and commercial applications, as well as being acknowledged as "the ultimate leisure computer."

Wordcraft's Jetpack CBM 64

In our recent mention of Wordcraft's Jetpack 64, we gave an out-of-date address.

The correct address is: Wordcraft International Ltd., Suite 3, Cowdray Centre House, Cowdray Avenue, Colchester, Essex CO1 1GH. Tel: 0206-561608

Rack It's Subterranea

A new Hewson/Mastertronic release, Subterranea has an initial five ships at your disposal. You must infiltrate 16 caverns of increasing difficulty. At the end of each cavern is a mass of flashing amoeba guards protecting a mother module. Invade the defence ameoba to zzap dead the mother module and earn an extra ship. Slowly and carefully you feel your way through the caverns — shooting at floating and darting alien bubbles and obstacles and temporarily de-activating the lazer gates control boxes.

SUBTERRANEA — shoot-em-up on Rack It Label for the Commodore 64 £2.99

And Herobotix.....

Authors Hewson/Mastertronic bang bang in which Herobotix, a Class IV Droid disguised as an Alliance Space Pilot Reconnaisance Droid is out to destroy the deadly Z RAY PARTICLE ACCELERATOR.

MISSION: Seek out the machine through screens of steel maze, moving escalators, defence droids (11 all told), space robots, ray guns, to shut off the computer system. Increase sonic power with a surge from the energy pads and collect your many weapons for the final terminal attack (you hope!)

HEROBOTIX for C64 £2.99

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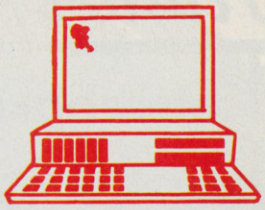

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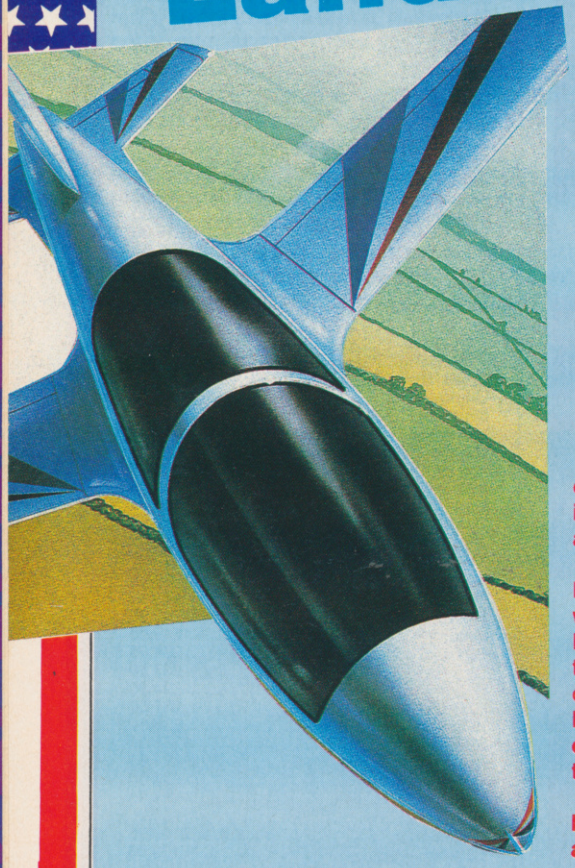
Microprose — *Market Leaders*

Part 2

In America
Land of Silicon Dreams



Not long ago a company whose releases were known and welcomed by only a few gameplayers, Microprose, was chosen by CCI as the software company of the year, worthy of our 1987 Oskar. What makes Microprose now such an important part of the Silicon Dream in America?

Microprose has its headquarters in the State of Maryland, on the opposite side of the U.S.A. from Silicon Valley where software companies like Epyx, Accolade and Electronic Arts are located. Yet the energy, enthusiasm and dedication of Microprose mirror those of its leading-edge Californian competitors 3,000 miles out west. And, even they would admit that its meticulously engineered products create an equal excitement and attraction for intelligent gameplayers across the U.S.A. and all around the world.

Microprose dynamic boss, Major "Wild Bill" Stealey (pronounced Stay-lee) would probably reject the word "equal". He would also forcefully claim that his team does not merely "mirror" but outshines the Californians and that Microprose products far exceed in excellence and value for money those of the other companies.

Major Bill, as he often refers to himself, especially in moments of drama and triumph when playing one of his own "games" — taking out a Libyan oil installation with Stealth Fighter or giving a Dutch pinnace a broadside in Pirates, has a fierce loyalty to the successful company that he and his partner, Sid Meier, to whom he gives substantial credit, have created in the last five years. Now one of the top four biggest U.S. computer entertainment companies — the others are Activision, Electronic Arts and Epyx — its turnover is reaching an annual $20 million (£12 million). What makes it different from the others is that it achieves that considerable amount with far fewer products. In its five year history, it has only released 15 titles, each of which has sold over 100,000 in the U.S. alone. Furthermore, they have all been highly specialised products — mostly 'combat simulations' whose potential audience is older and would seem very much smaller than easy-selling arcade-style games.

"It has acquired no big coin-op licences . . . bought no smash hit TV or movie tie-ins . . . written no clones of other people's chart toppers"

It has acquired no big coin-op licences . . . bought no smash hit TV or movie tie-ins . . . written no clones of other people's chart toppers. Micropose has employed its own ingenuity and technical ability to use, in most cases, just a barely-known military vehicle in titles like F15 Strike Eagle, Gunship or Silent Service, presenting a submarine, heli-

'Only the action is simulated. The excitement is real!'

copter or, close to the heart of ex-U.S. Air Force pilot Major Bill, a fighter plane, with as near total fidelity to the real thing as Sid Meier and his experienced team — none under twenty-five — can create.

Yet despite its very specialised field, and apparently limited appeal, Microprose has hit the mark time and time again, virtually creating a market for itself that hardly existed before. It seems that it has somehow accurately touched the aspirations of possibly millions of home computer users to enjoy, in safety, the thrills of dangerous environments which not only will they be unlikely to have the chance to experience but that would probably scare the hell out of them if they ever did. For the combat simulator players, Microprose's slogan "Only the action is simulated, the excitement is real!" is obviously a highly attractive formula that is certainly gaining more fans around the world all the time.

The spreading of the Microprose semi-technical, semi-thrilling message is not left to chance. The company is not only skilled at creating products but also at marketing them. Major Bill's Master's Degree from Wharton, one of the U.S.A.'s top business colleges and five years as a management consultant after he left the Air Force are less frequently noticed than his gungho style, penchant for combat fatigue/flying kit and talent for attracting publicity. But they are really what lie behind the confident management thrust needed for the impact it has made on the entertainment software industry in the U.S. since 1982.

"Bill Stealey speaks warmly of Geoff Brown, the U.S. Gold boss. But now Microprose is a friendly competitor of the UK software giant and clearly relishes Microprose's independent position"

More recently, Microprose has opened a European headquarters in the UK and an office in Japan and its "brand awareness" has visibly increased. Until 18 months ago, in Europe, its products were released through U.S. Gold and Bill Stealey speaks warmly of Geoff Brown, the U.S. Gold boss. But now Microprose is a friendly competitor of the UK software giant and clearly relishes Microprose's independent position.

The UK, European and Australian area of Microprose is run by Stewart Bell. A tall, non-stop action Englishman,

70,000 Pieces of Gold!

CCI had the interesting experience of being given a private view of what is really the most important activity in Microprose.

Major Bill Stealey, in spite of his serious business background, is not so involved running the company to neglect the really vital work. Every evening, he sits down at a monitor and gets into one of Microprose's products for some heavy game play. His current favourites are Gunship on the IBM and Stealth Fighter and Pirates on the 64.

To sit beside him — he insists you take over control from time to time and gives you useful tips on how to get

Stewart Bell's Ferrari — a mobile advert for Microprose success

continued on next page

In America
Land of Silicon Dreams

he has created a notable impression since he joined Microprose to start the new division in his back bedroom late in 1986 — not least when in a big-peaked white Microprose cap, he traffic policed the crowds attempting to pack the real-life aircraft simulator that Microprose took to the 1987 PCW Show.

Microprose Europe soon moved out of Bell's bedroom and now with around 70 people occupies two buildings in Tetbury, in the beautiful Gloucestershire Cotswolds — a village it shares with the estate of the Prince and Princess of Wales.

Stacks of the familiar boxes in the Tetbury UK warehouse.

"It is said that even a U.K. YTS trainee on some £40 a week received over £500 as a 1987 Xmas bonus"

Stewart Bell's own role in Microprose substantial success is recognised untintingly by Bill Stealey. It is also signposed by Bell's growing collection of expensive cars. So far this includes a Range Rover, a BMW and most recently, a Ferrari. There are rumours of the Microprose office in his home being replaced by a huge jacuzzi with (practically) a live-in plumber to make up for the vagaries of

Major Bill Stealey and Stewart Bell, Microprose high flyers.

British water-pressure and more symbols of the prosperity the success of Microprose has brought. That prosperity has spread through the whole company. It is said that even a U.K. YTS trainee on some £40 a week received over £500 as a 1987 Xmas bonus.

Major Bill insists on Bell's outstanding role in the recent rise of Microprose outside the U.S. He and Bell are clearly

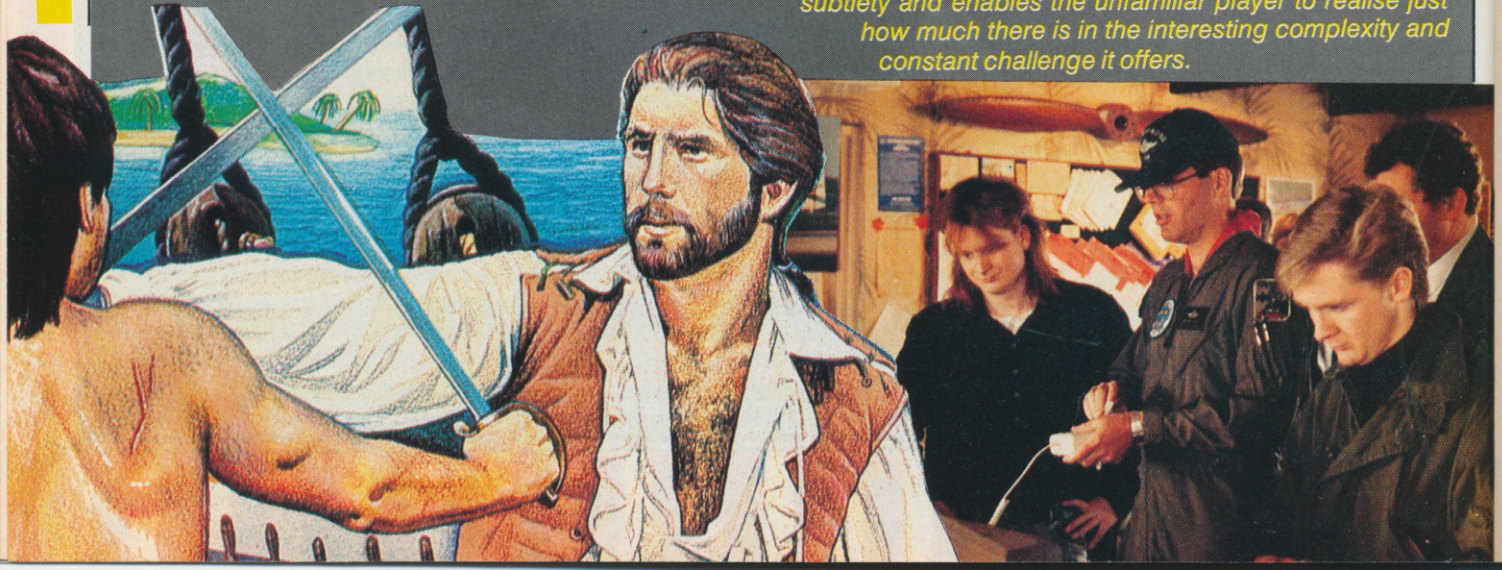
continued on page 22

nearly as good as he is — is an education in how a keen, skilled, experienced player takes on a tough, challenging game.

" You could imagine him later grinning modestly as President Reagan shook him warmly by the hand and told him that he was the right stuff "

Major Bill goes at it with a fierce determination but all the time with the relaxed air that benefits a well-trained fighter pilot from the U.S. Air Force. Gunship and Stealth Fighter, of course, come naturally to him. In the top secret new U.S. radar resistant aircraft, as he flew us in on a Libyan oil installation, It was like being a passenger on a real mission with a confident and expert pilot whose easy joystick control brought us in at just the right speed and exactly the correct angle to blast away the target. The rockets taking out the installation were almost a formality. This was clearly some pilot at work. You could imagine him later grinning modestly as President Reagan shook him warmly by the hand and told him that he was the right stuff.

With Pirates, although Major Bill still had that sharp concentration on the evolving range of factors to be calculated on the sea battles and the hand-to-hand fights, he allowed himself a more rumbustious, swash-buckling style. He must have put in hundreds even thousands of hours sailing Caribbean and privateering in search of Spanish galleons and the Silver Train but he shows no sign of being anything but still enthralled at this unusual historical combat simulation. He is, however, not the only Stealey to play Piratically at this game. He says his daughter enjoys it but she complains that it has no Miss Blackbeard for her to role play. CCI revewed Pirates enthusiastically a few months back but to see it develop under the sure steering to Cap'n — sorry Major Bill — is a revolation. He has played it so often that he clearly appreciates every subtlety and enables the unfamiliar player to realise just how much there is in the interesting complexity and constant challenge it offers.



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proud of the enthusiastic response Europeans have given their products and the growing impact of the Microprose name and reputation. Stealey and Bell have an easy and apparently lighthearted relationship, an attitude which is felt throughout the company. Somewhat unusually for an English village, lights stay on in the Microprose offices into the night and the staff often work until 9 p.m or later but in the more relaxed moments there is a lot of joking and laughter — a general cheerfulness and good humour that is typified by a sticker attached to a lavatory seat that says "Join the U.S. Gold Club here".

The surroundings at Tetbury could not be more sharply different form the contemporary Silicon Valley environment. The beautiful village is all grey Cotswold stone and quaint antique shops. Microprose has two separate sites: a smart red and cream decorated office complex housed deceptively in a typical but sizeable stone-clad building, and a spacious warehouse in which large stacks of the familiar large boxes, mostly bright red and blue, are assembled and stored.

Microprose not only distributes in Europe but also manufactures all its own products too. It has ambitions beyond its own expanding combat simulation market. It has created a number of joint ventures with other U.S. companies for which it acts as distributor.

"There is also a joint venture with Springboard whose Newsroom for the 64 is creating something of a sensation as an exciting package for the fast-growing Desk Top Publishing world"

The most well-known of these is Origin whose Ultima series of role-playing games are legendary. Shortly to come on the scene is the long-awaited Ultima V — a sure success, Microprose believes. There is also a joint venture with Springboard whose Newsroom for the 64 (reviewed CCI April) is creating something of a sensation as an exciting package for the fast-growing Desk Top Publishing world. The PC version is also beginning to take off in the highly competitive IBM compatible market.

Outside software, there is a joint venture with Suncom in peripherals, mainly control devices like a quality joystick and the interesting Icontroller reviewed in last month's CCI. Recently, Microprose has also taken on the

distribution of the growing range of Berkeley Softwork's popular GEOS products. Despite these other profitable activities, Microprose still sees its central theme as the games — combat simulations — that have created its unrivalled reputation. These are intended not just as a simulation of a realistic environment, probably of some form of military craft, but to offer more than that rather dry almost educational procedure by adding the intoxicating nectar of exciting action.

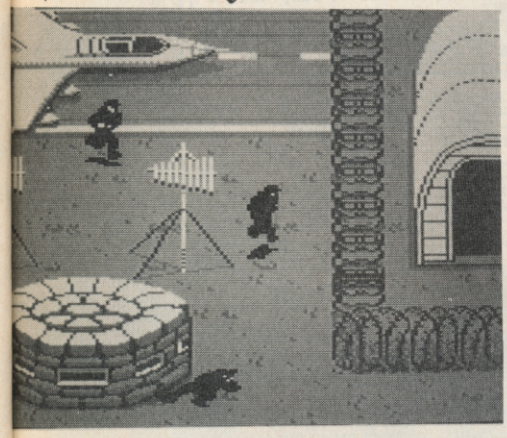
The idea that when a player sits down in front of his screen ('his' because Microprose admits that it has largely failed to reach any but the male market) he can take the place of a real helicopter pilot or submarine captain is not new. Before Microprose was formed, flight simulators — real ones for professional aircrew and home computer versions — already existed. But Microprose, both through the undeniable excellence of its products and also the strong action factor they have incorporated seem to have created another dimension to the concept that has caught the imagination of a much wider public. It appears to have achieved the difficult balance that satisfies the demands of the meticulous simulation buff who wants every dial and meter in the cockpit to be exactly those found in the real aircraft and at the same time provide the fire-breathing arcade addict with enough of the hair-trigger mind-blowing joy of blasting away the baddies to gain his loyalty too.

"Microprose boxes nestling on sale among very different products in sex shops in Hamburg's Rieperbahn and the Red Light districts of other German cities"

The stark realism of a violent, warlike world that this formula offers has brought its problems. In Germany, Microprose has fought a running battle —an apt erm for such a combative company — with the authorities who have banned some of its products as breaking the rules governing the sale of "aggressive" games. Like all publicity of this kind, the banning seems to have done no harm to Microprose's popularity, even if the odd picture is of "Gunship" and the other familiar brighly coloured Microprose boxes nestling on sale among very different products in sex shops in Hamburg's Rieperbahn and the Red Light districts of other German cities.

One of the most interesting facts about Microprose is that it continues to sell virtually every "game" it has ever released. Even the earliest still continue to find new buyers. For, as computers establish themselves as normal features of every family home, the age-group of experienced users rises; and as players get older, they ask for something more challenging than simple shoot 'em ups. It seems that once you play one Microprose product, you are likely to get hooked and probably want to try them all — even the ones that may have come out before the one on which you started. So each Microprose release finds an

In America
Land of Silicon Dreams



audience, often eagerly waiting, of a substantially bigger size both moving forward to its new products and back to the earlier ones.

Once exclusively on the 64, Microprose is now moving into the IBM compatible and the Amiga markets and also into the other popular 8 bit machines. It continues to spend three, four or even five man years of development on each product — and now perhaps on each format — to ensure the standards are kept high enough for its keen but hard-to-please fans. As it brings out only two or three new products per year, it looks improbable in this technological and turbulent world that it will all become so peaceful that there will be not enough new weaponry for Microprose to simulate and combat.

So, if you were looking into the future and picking just one of those impressive U.S. companies still to be highly successful five or even ten years from now, you would be very unwise to ignore Microprose. It may unusually not be based in California's Silicon Valley but it shares with the inhabitants of that mythical area their drive for urgent technological progress and fierce ambitions for excellence. But most importantly there are hundreds of thousands of fans around the world who spend massive amounts of time on the believable illusions of it creates of combat simulation.

The Microprose slogan may claim "The action is simulated, but the excitement is real" however what it is actually selling — especially as its products inevitably move closer and closer to the real thing — is a brilliantly executed, ever more convincing and attractive escape into a silicon dream world where all the wishes of successive generations of aggressive gameplayers can come true in the safety of their own homes — and there is nothing surer than there will always be a market for that.

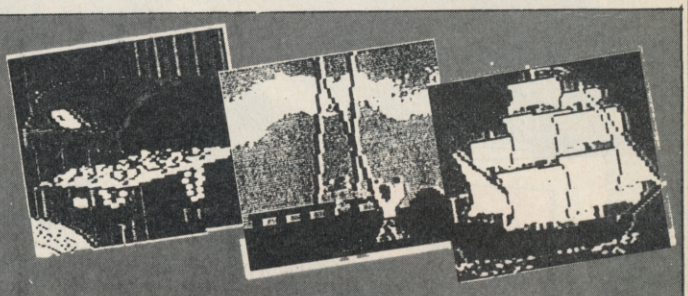
Microprose —
15 successive hits . . .

- Mig Alley Ace
- Hell Cat Ace
- Spitfire Ace
- Kennedy Approach
- Decision in the Desert
- Crusade in Europe
- Nato Commander
- Conflict in Vietnam
- Acrojet
- Solo Flight
- Silent Service
- F15 Strike Eagle
- Pirates
- Airborne Ranger
- Gunship

and Project Stealth Fighter . .

PIRATES!

We sailed the Spanish Main in the guise of an Englishman — though there were a number of other options. We were ambitious and ruthless. We gave no quarter, though because the game is intentionally designed to be without the killing of most Microprose releases, we did take prisoners. In an hour and a quarter's play we — mostly Major Bill, it has to be admitted — had attacked, boarded and captured a string of barques, pinnaces and frigates of Spanish, Dutch and French origin. We had become the owners of a flotilla of eight ships. Most had been taken by a neat manoevre "Crossing the T" - sailing at right angles to the enemy's bow or stern and raking them with our broadsides: but not too violently, so that we could capture them for prizes rather than sink them. We had fought their captains man-to-man — Major Bill advises the long sword as the favoured weapon-until the enemies had knelt in submission. We had also traded the captured ships and their cannons and goods. We had repaired damaged vessels, been deserted by greedy, dissatisfied seamen, recruited others in the taverns of the ports we visited or stormed and even acquired 300 acres of land on two different West Indian Islands ceded to us by grateful British governors.



What we had not done was persuaded a Governor's daughter to consider granting us her hand in marriage. That was, explained Major Bill seriously, because we had only reached the lower levels of rank. There are over twenty levels to pass through before reaching the elevated King's Adviser, which Major Bill admits he has still not yet attained - nor has he ever found his missing sister.

We had, however, in a last frenzied burst of commercial activity, selling off most of our ships, accumulated 70,000 pieces of gold. We thought that an excellent result but Major Bill once totalled 700,000 in a single long game of Pirates . . .

Still 70,000 pieces of gold wasn't bad . . . "Have you saved this game to disk?" Major Bill asked. "I want to go on with it tomorrow" One day, if it takes him until the next Microprose product is released, he is going to make King's adviser, find his sister and even marry the Governor's daughter. You can bet your load of gold pieces on that.

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★ Mystery guest appearances ★

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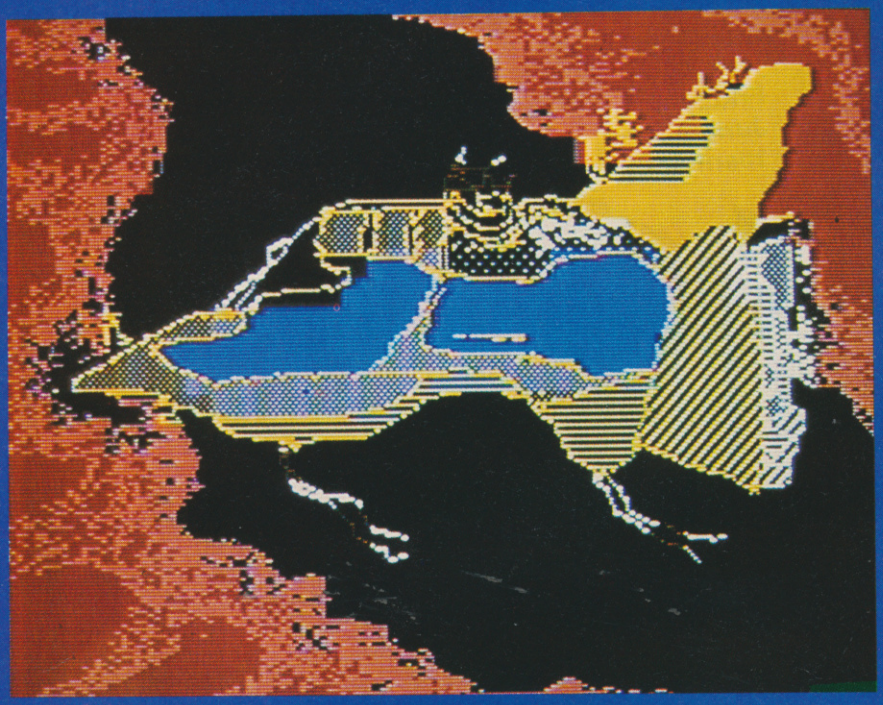
INKWELL

184 Light Pen and



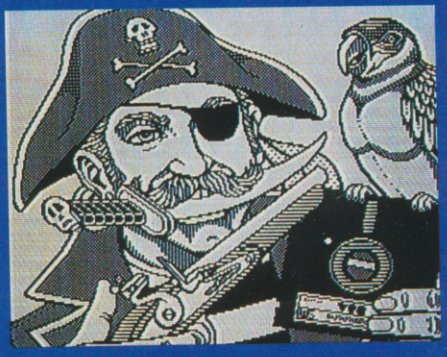
I remember the first time I used a Light Pen: it was at a ZX Microfair a long time ago. I would guess the software it used was written in BASIC, as the cursor speed was about one pixel per second. Consequently, my test circle ended up as a hedgehog. Since then many have passed through my hands, some good, some not so wonderful. As I set up Inkwell Systems' pen I wondered if there was anything new on the light pen scene.

"The touch pads are excellently responsive and allow you to aim the pen some distance from the screen"

Inkwell's 184 pen is of a simple elegant design; plugging into the joystick port, it has touch sensitive mini-pads on the top of the stem. These touch pads are excellently responsive and allow you to aim the pen some distance from the screen. The distance governs the width of the fill, too. The further away the wider the fill area. This certainly looks and feels sturdy and works efficiently. However, a light pen is really only as good as the software it uses. Inkwell Systems also supply graphics packages called Flexidraw to go with the pen.

With the exception of one point, Flexidraw is a fully fledged art program with most of the frills we have come to expect. Its main drawback is that it only runs in hi-res mode, limiting each character block to two colours. This makes neatly colouring pictures a lot more fiddly than if it used multi-colour mode. Once you have drawn your picture, it has to be saved before loading the program that adds the colour. Load the picture file into the colour program and you can paint it a block at a time. The problem with this is that when you find you need to alter the picture, you have to go through all that loading and saving again. However, if you really need to use multi-colour mode, you could always get a compatible program such as Blazing Paddles.

The biggest advantage of using a light pen for computer graphics over a mouse or a joystick must be the user's ability to draw freehand on the screen just as if it were paper. There are some modes available for sketching: the default simply plots the points of the pen on screen. A filter mode can be used to smooth out lines and a grid mode draws lines only from one character corner to another. Using the first method, the effects will be somewhat shaky. A cursor indicating the pen's position would have helped accurate drawing, as the inconsistent pen to line distance makes this tricky.



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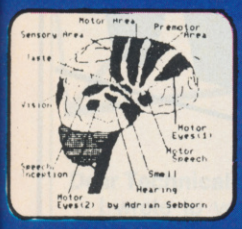
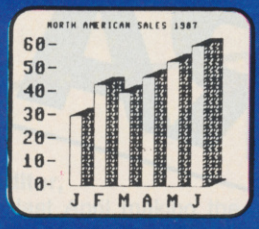
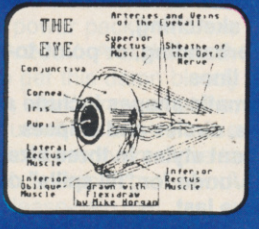
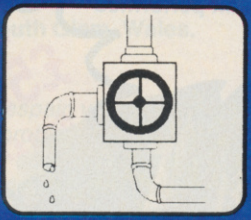
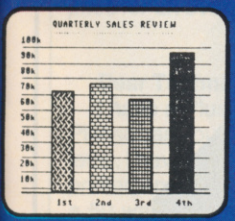
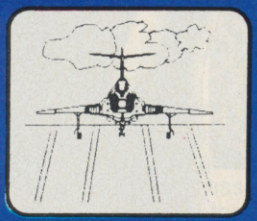


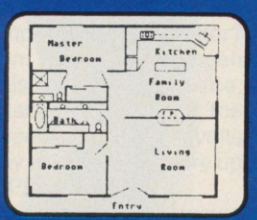


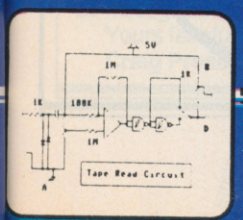


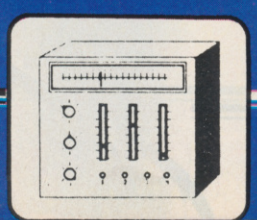












"A number of other good features such as split screens, a variety of fonts and a simple sprite editor and animator make Flexidraw a program capable of excellently showing off what is possible with the pen"

Boxes, curves, circles and ellipses are all extremely easy to create. Fourteen invertable fill patterns are available, with the option to fill an area with any symbol from the keyboard. To make up for the lack of a cursor, Flexidraw has a zoom function for drawing fine details. A number of other good features such as split screens, a variety of fonts and a simple sprite editor and animator make Flexidraw a program capable of excellently showing off what is possible with the pen.

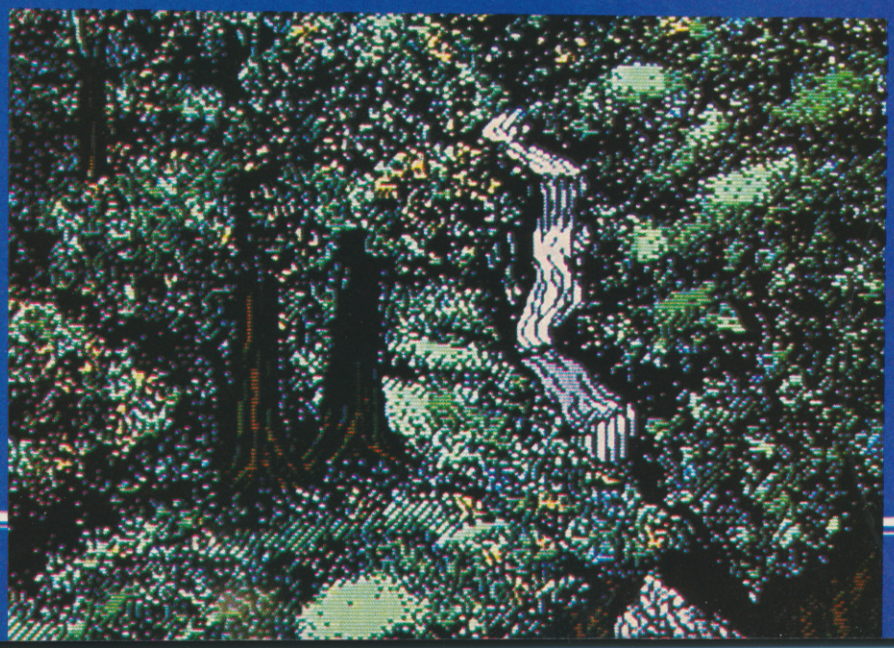
Of course, art is not the only use for a light pen. A set of demos come with the pen to prove this. These are written in BASIC and consist of a couple of simple music generators, a version of Simon, and one that merely tells you the position of the pen on the screen. These could be helpful in using the pen in your own programs. Anyone with Laser Basic will find it very easy to program using its LPX and LPY functions.

"Flexidraw and 184 ight pen are a satisfying and capable team"

The only possible problem with the software is its limitation to hi-res mode. Those unfamiliar with the workings of the mode could find it confusing to start with, and then might well miss the 64's multi colours. That aside, Flexidraw and 184 ight pen are a satisfying and capable team. If you are looking around for a graphics package, and a light pen to make it easy and effective Inkwell Systems' offering will serve you very well. *T.H*

Price: 184 Light Pen £59.95
Flexidraw £18.95
Contact: Inkwell Systems, 5710 Ruffin Road, San Diego.

See Lightpen offer on page 28!



Inkwell Systems

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Inkwell Systems' 184 Light Pen is one of the most outstanding graphic tools ever produced for the 64/128. It is already extremely successful in the U.S.A. where Inkwell Systems have established a strong reputation for high quality graphic products that are truly "state of the art". Beautifully designed, the Light Pen is sturdy, reliable and easy to use.

The 184 Light Pen is ideally matched with Inkwell System famed Flexidraw Graphics Program. The latest version — Flexidraw 5.5 (on disk only) supports not only the Light P but also Koala Pad, Joystick or Mouse. It enables you to produce the whole range of art effects from simple freeha sketches to detailed technical drawings without previous computer graphic experience.

The usual price is £59.95 for the 184 Light Pen and £18.95 for Flexidraw 5.5. As a Special Offer to readers, CCI is abl to make available both exciting graphic products for only price of the Light Pen — **£59.95!** ***This is a saving of £18.95***

On-screen menu with full audio/visual feedback includes these features:

- Use light pen, Koala pad, joystick, mouse or cursor keys to draw and/or placing images
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- Drawing enhancements include pattern fills in light or dark areas, with hundreds of pattern choices, shading capabilities and page outline or picture simplify commands
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Signature ..... Exp. date .....

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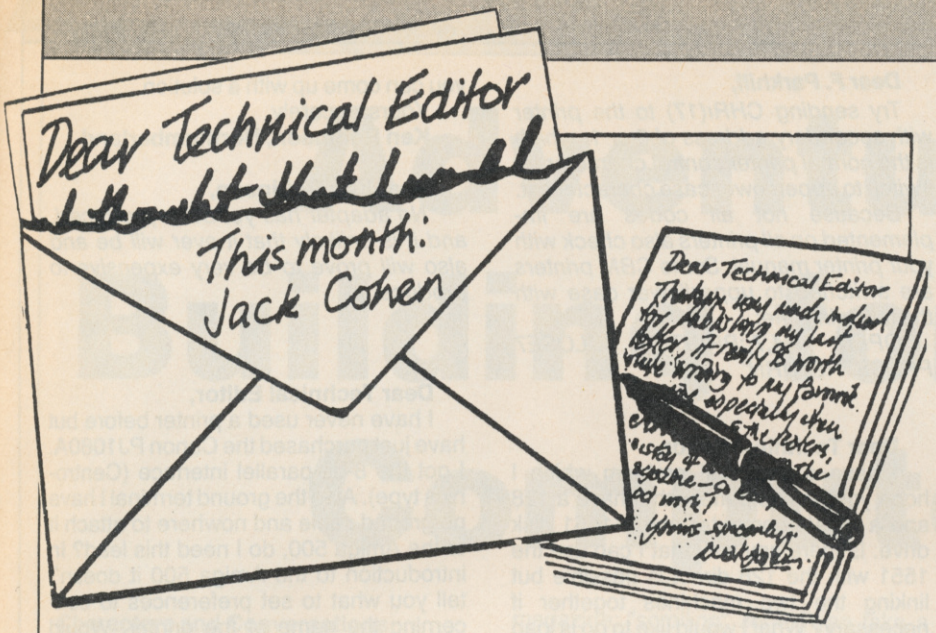

Dear Technical Editor,

I wrote to you last April making the point for Plus 4 users. But this time I write to you in despair. Even I am baffled this time, I don't know whether it's the computer or the power pack. I know it's not the cassette player, because I tried my friend's, but it was no good either. I call it a problem. None of my games load, without hours of waiting. I even tried my friend's again, but still there was that awful nuisance, and I don't know what it is. Could it be the fuse in the power pack? which is the type T160 m A 250V. And the problems attempting to get this damn bloody stupid fuse. Please, I don't know what it is, and tell me how much it will cost. Please answer my letter as I am so very close to my Plus 4, which if I can't soon get to work will be an Amiga. Please help me!

Yours sincerely,

M.A. Spear, South Glam, Wales.

Dear M.A. Spear,

No need to be in despair, you will find the answer to your problem amongst our advertisers in this and previous issues. Ring one of them for details of their repair services, most will quote an inclusive price for an overhaul.

Dear Technical Editor,

I have a Plus/4 with a 1551 disk drive. Please can you help with a couple of problems. I have been given a 3M brand name printer, and I would like to use it, but it has a 50 way plug on the end. I believe the printer is about 10 years old and made in the States by a company called Linneker? My second problem is that I have been given a monitor, also a 3M brand name, but no further details, I have taken the cover off and it seems to use 24 volts supply? Is there any way that I can wire up this monitor to my Plus/4?

If you could help me in any way I would be most grateful.

Yours faithfully,

Craig Prescott, Middx.

Dear Craig,

The short answer on the printer is no, mainly because a printer that old will not have the facilities required by modern micros. What sort of socket does it have? Most printers are either RS-232 serial interface or a parallel interface such as Centronics. A few such as those designed for the CBM PET etc. use IEEE parallel interface. Even with the right interface the printer most likely will be unable to print CBM graphics properly. You will also need a printer driver routine as well as the appropriate cable. Other considerations are the availability of ribbons, print wheels and spares in the event of breakdown. The monitor can be used if you have the appropriate cable and suitable socket for inputs. It is up to you whether the end result is worth all the effort needed. C64 software can be used on the Plus/4 if it is simple software, i.e. not using the advanced features of either machine and using common kernal routines or basic, again without calls to specific routines not implemented in both.

Dear Technical Editor,

I wonder if you can send me details of the colour code wiring inside the video output plug leading to the RF Modulator of the VIC20.

Hope you can help.Thanks.

P.T. Kirby

Dear P.T. Kirby,

The plug referred to is the one that connects to the Audio/Video Port in Vic20.

Looking at a clockface for reference: Description Colour (may vary)

Pin 1 is at 20 past the hour + 5v—20ma. maximum red

4 25 VIDL Video Low Black

2 30 GND Ground/Earth

5 35 VIDH Video High White

3 40 AUD Audio out Grey

Dear Technical Editor,

I started using Commodore 64 with a disk drive 1541 a few months ago. When LOADING a program from the MINI OFFICE II, on some occasions, I encounter difficulties as the program does not seem to be present; and on some occasions, it LOADS and works perfectly. It is so tempermental. Has anyone else experienced the same problem?

Is there anything wrong with my computer or disk drive? Your expert advice is most appreciated.

J.E. Yeoh, Essex

Dear J.E. Yeoh,

The problem you have is an indication that the disk drive head is out of alignment. The commercial programs that check for disk errors as part of their copy protection, are usually the cause of this mis-alignment. The head bumps against the stop and gradually knocks it a little further out of alignment each time, until eventually the disk is almost unreadable. This can be permanently corrected by a disk specialist such as Microport (on 01 953 8385).

Dear Technical Editor,

I am a serving member in the army. Whilst in W. Germany I purchased a Commodore 64. With the computer I got a free GEOS disk but the only problem is the manual is in German. Could you give me an address where I would be able to get a manual which is in English. The version I have got is the GEOS 1.2, could you also tell me how many disks there should be as I have only one and in some magazines I have read there should be two.

Yours faithfully,**A. Filsell, Hants**

Dear A. Filsell,

An English version should be obtainable from Commodore Germany who package them with the 64 for our market. Stocks would not usually be held here in the U.K.

Dear Technical Editor,

I am thinking of buying a disk drive for my CBM 64 and have decided to go for an Excelerator, which has a good deal at the moment. I have two questions concerning this.

Evesham are offering the "Freeze Machine" with the drive at a discount and I would like to know if it is worth buying this cartridge to make backups of my tape-based software. Would it copy my tapes, including multi-load games such as Stealth Fighter, Platoon and Flying Shark? Is there any cartridge that would do this, if not the "Freeze Machine"?

My second question concerns printers. I would be using a C.A.D. package to do circuits, charts etc. and I would like to know what printer (preferably under £200) you recommend to print out these designs to a fairly good resolution.

Oh, and by the way, is there a particular word processor you recommend? Thank you for your time.

Yours sincerely,
A. Hughes, Manchester

Dear A. Hughes,

As far as I know no cartridge will copy all the Multi-Load Games. Any printer mentioned in your package as being supported by it will be best. Pick the least expensive one. As for suitable word processors take your pick from the following: Superscript, EasyScript 64, Paper-Clip, SpeedScript 64, and WordPro 64. There are many others just as good.

Dear Technical Editor,

I have a DPS1101 daisy wheel printer which I am using with a C128 in the 64 mode to run a work processor. The printer works fine in the test programme but will only print in upper case when running from the computer. I have tried setting the dip switches in various positions without much success. I have also tried writing to Commodore, again without any success as they have not even replied to my letters. I will be buying a new computer later this year and had been thinking about an Amiga, but if this is how Commodore treat their customers I don't think so.

I am using a C128 to run a small business and do not want to change it just at the moment, so I will be grateful for any suggestion you can make.

Yours faithfully,
F. Parkhill, Co. Londonderry

Dear F. Parkhill,

Try sending CHR$(17) to the printer with secondary address of 0 or 1, which is the normal printer control character for switch to upper/lower case character set.

Because not all codes are implemented on all printers also check with your printer manual. Some CBM printers are switched to upper/lower case with the following line:

OPEN 7,4,7,:PRINT£7: CLOSE7 PRESS "RETURN"

Dear Technical Editor,

I have a technical problem which I hope you can help me with. I have a 128 and a Plus/4 computer and a 1551 disk drive. Is there any way that I can use the 1551 with the 128 direct is possible but linking the two machines together if necessary? What I would like to do is load and save programs and files on the 1551 to use on the 128, I know that I can link the two machines together via the user port and transfer files that way but there is a problem. I am a licensed radio amateur and I use the user port with packet radio etc. so is there any way either direct (changing chips circuits etc.) or if by linking the two machines together. Is there a way of doing this other than the user port, and if so what kind of program am I going to need to get the two computers to talk to each other because I am not a programmer, I don't want to get rid of the disk drive for two reasons one of which is that I can't afford an other one and the other is that I think it is a good drive so I am hoping that you can come up with a solution.

Yours sincerely,
Ken Robinson, Northumberland

Dear Ken Robinson,

No adapter has yet been produced, and it is unlikely that it ever will be and also will prove to be very expensive to produce.

Dear Technical Editor,

I have never used a printer before but have just purchased the Canon PJ1080A. I got the 8-bit parallel interface (Centronics type). Also the ground terminal I have no ground cable and nowhere to attach it to the Amiga 500, do I need this lead? In introduction to the Amiga 500 it doesn't tell you what to set preferences to concerning the name of the printer. Would you send me details as quickly as possible as to how I am to set it up as the manual with it does not tell you.

I want to use it on Deluxe Paint 2 etc. Also, do I need to expand the memory of the Amiga 500 to 1 megabyte to use a printer.

Yours faithfully,
M. Dunkley, Leicester

Dear M. Dunkley,

Contact Precision Software on 01 330 7166 who sell a printer-driver for the Amiga/Canon combination at £9.95 and also sell a suitable cable at £14.95 including the necessary ground connections. No extra memory is needed.

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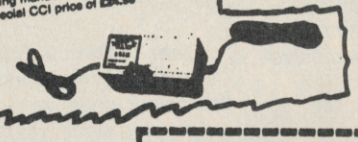

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Characters and Conversations

You are all familiar with characters from the various well known adventures that are on the market, dating back to the bear and the troll in Colossal Cave and on to such luminaries as Bilbo, Rincewind and Huey (who?). Well, Huey might not be news but he's known to some of us. In an adventure game the starting point is always, but always, that you have taken on the guise of a certain character and, using that character's characteristics (if I may be allowed such a sentence) you have to solve the problems presented to you. Now then, in the real world of banks, mortgages, and Wigan, one would not expect to survive for very long without bumping into other people. So it is no surprise to learn that the vast majority of adventure games also feature people other than your good self. Whether these people are goodies or baddies or merely bodies who get in the way is obviously up to you, the programmer, but they do have a habit of cropping up from time to time.

Sometimes they are essential to the solving of the game, at other times they are just there to add colour to the atmosphere of the adventure, and so in order to consider both those cases this month we will be taking a look at a listing or two from an adventure that I recently completed.

As ever, before attempting to look at someone else's code you will need to know a few things about the program that from which it is taken. So, bearing in mind that this game is not on the market and that therefore I cannot be accused of advertising (however . . .!), here goes.

A brief look

In this adventure you take on the persona of Dimli Gloing, legendary troll slayer and dwarf extraordinaire. Your mission is unimportant, suffice it to say that you are Dimli the dwarf (a character created, incidentally, by a person whose name will be familiar to readers of this magazine; "scrolling" John Ryan take a bow) and that you have a problem to solve. In order to assist you in this quest you have a faithful companion, a wizard called Strombrigner (so named by his dyslexic parents) who likes to style himself as Strombrigner the Grey, but in the real life world of adventures he is actually not that good at casting spells. He is not very fond of Gandalf, considering him to be very over-rated, and unlike Thorin's musing about gold he is apt to set down and think about Tetley's Bitter and The Shepherd's Arms, his favourite pub.

Other characters abound in this particular game, but at the grave risk of offending various people who appear from time to time the only one other than Dimli and Strombrigner that we will consider is Legolas the Elf who, as we shall see, rapidly becomes Legless the Elf, since all his activity seems to take place in a pub.

How then, and this is the point of the whole thing, would one go about programming characters such as this into an adventure and, having done so, how does one make it possible for the main participant in the game (the player, of course!) to communicate with them and to try and get them to do things? Read on, gentle reader.

First Appearance

Taking things in their usual logistic order we will first of all consider Figure One, which is where our two main characters manage to put in an appearance. Two things to note: the variable CP is used to denote the player's current position, and that locations 12 and 17 are all set inside the pub; location 11 is just outside it.

Right, let's consider the lines 1080-1090.

After defining a variable "a", lines 1080, 1081 and 1082 use the variable 11 to keep track of the number of times that Legolas the Elf has visited the pub. Every time a player makes a fresh move in the pub, and after the room description has been printed up and the player's position amended, then we come to this routine and increment "11". However, after ten visits the poor little elf can drink no more, and so we don't want to set "11" to any greater value than that. Thus we either set the variable "mess" to be between 100 and 109 to describe each of his first ten visits, or set it to 110 to describe what happens to him after that, before sobering him up again. This message printing is done by using a subroutine starting at line 5990, which simply prints u[a message dependent on the value of "mess". Needless to say by this time Legolas has been transformed into Legolas, and although he only makes a fleeting visit each time he's in the pub a player of the game will inevitably, sooner or later, type in the request GET LEGLESS. I will leave you to work out a suitable response to that!

Strombigner the Grey is our other main character, and the next few lines in this section all deal with him.

Line 1083 determines his first appearance, which is in room 12, the heart of the pub. If the variable "ww" has not been set and the player is in that location, then set it, set also the variable "wf" which indicates the wizard's presence, and print out the three messages that describe his arrival upon the game. The subroutine at line 2428, by the way, is just a delay loop to give the player time to read each message as it pops up on the screen.

Line 1085 is used after the wizard has first appeared, and if the random number generated falls into a suitable range and the variable "ss" currently holds a value less than 11 then we just print up a random message. Rather like Thorin sitting down and singing about gold. If the variable "ss" has a value greater than 10, however, then we have a different situation. After the wizard has been found he follows you about determinedly, but as time goes on he begins to yearn for a drink in the pub again, and so after every move the variable "ss" is increased, unless you give him something to do to stop boredom setting in. If you don't, then line 1090 whisks him back to the pub again and increments the variable "vp". This is be-

continued on next page

cause the program is keeping track of how much he has to drink, this, reasonably enough, affecting his ability to cast a spell.

Line 1086 announces the re-appearance of the wizard if he has left you and you have gone back to trace him again. A rather shame-faced wizard comes back to your side in the middle of the pub.

This then leads us nicely into our next section, which is a look at the verb SAY and how it is controlled in the game.

Saying things

This is, as you can probably imagine, quite a reasonably complicated bit of coding, so before looking at the listing it's worth considering exactly what we want this code to do. It's almost a miniature program in its own right.

Figure One

```
1080 a=INT(RND(0.5)*100):IF (cp>11 AND cp<18)
 THEN 11=11+1:PRINT
1081 IF 11>10 THEN 11=0:mess=99+11:GOSUB 5990
:GOTO 1083
1082 IF (cp>11 AND cp<18) THEN mess=99+11:GOS
UB 5990
1083 IF cp=12 AND ww=0 THEN ww=1:wf=1:FOR q=1
 TO 3:mess=q:GOSUB 5990:PRINT:GOSUB 2428:NEXT
1084 IF wf=1 AND a>75 AND ss<11 THEN mess=INT
(RND(0.5)*2+8):GOSUB 5990:GOTO 1086
1085 IF wf=1 AND a>75 AND ss>10 AND (cp<11 OR
 cp>17) THEN 1090
1086 IF cp=12 AND ww=1 AND wf=0 THEN wf=1:mes
s=5:GOSUB 5990
1088 GOTO 10
1090 mess=4:vp=vp+1:ob%(17)=0:wf=0:ss=0:GOSUB
 5990:GOTO 10
```

Line 1088 just wraps things up and sends program control off to line 10 to get the rest of the program running again.

So, that is one way in which we make our characters appear and disappear. Since they are present in the game people are inevitably going to try and talk to them, and so the next routine takes care of that.

Talking to people

In the introduction to the game one is told that the correct syntax for talking to characters is SAY TO STROMBRIGNER "CAST A SPELL", or whoever you happen to be talking to. People will, however, use the verb TALK, and this is what figure two looks after.

As you can see, a very short routine. The first line is used if the player attempts to talk to noun 21, which is the word "me". A suitable response, I think.

The next line checks to see whether you're in the pub and trying to talk to Legolas (or whatever stage he has reached by now!), before line 3453 sends us off to line 2396 where we can take care of a player attempting to talk to inanimate or animate objects. We'll see line 2396 later.

The first objective of the program is to sort out what the player is trying to say. Is he talking to a character, or is he saying one of the two magic words that the program recognises? Obviously then we'll need seperate routines to handle the two different categories of people and magic words.

The second objective is to find out who the player is talking to, since there's only really Strombrigner who'll do anything. We then must find out what he's trying to get the wizard to do, and finally we can determine whether or not the wizard is capable (or incapable) of doing it. Sounds easy, doesn't it? Don't forget that we're going to have to include a shortened version of our parser in here as well, as we have to analyse what is contained within the quotes in our SAY TO STROMBRIGNER "DO SOMETHING" syntax.

Lines 2350 and 2351 handle the two magic words, by seeing if the player is attempting to say "POTZZ" or say "TETLEY". If he is then a totally seperate routine that need not concern us is called into play. Basically it looks to see where the player is and what variety of conditions have been set before determining whether or not the word will have the desired effect. If you're experienced at reading backwards as well as forwards you will by now have realised that I like drinking Tetley's bitter and listening to music by ZZ Top. End of musical interlude.

Figure Two

```
3450 REM
3451 IF na=21 THEN PRINT "Why should I?":GOTO
 10
3452 IF (cp>11 AND cp<18) AND na=31 THEN mess
=182+11:GOSUB 5990
3453 GOTO 2396
```

From now on we know that the player is trying to talk to someone, or something, and the rest of the routine is used to sort all this out. Lines 2352 to 2354 determine where the quotation marks appear in the player's input, which then gives us a variable "talk$". Thus if the player typed in SAY TO STROMBRIGNER "CAST A SPELL" then "talk$" would contain "CAST A SPELL", leaving the rest of the string untouched. If, however, the program fails to find any quotation marks (CHR$(34) by the way) then program execution goes off to line 3864 to print up a suitable response for what this routine considers to be a nonsensical input.

Having found out what we're saying we then have to find out who we're saying it to, and this is the purpose of the first part of line 2356, which gives us "man$" to contain the name of the person being addressed. If, by any chance, the player were to type in SAY TO ME "HELLO" the program would then respond with "HELLO" before going back off to line 10 to get another input.

If the player isn't talking to Strombrigner, then line 2357 sends execution careering off to line 2390, which we'll come to later.

Now we know what the player is trying to say and that he's trying to say it to Strombrigner. So, line 2358 checks to see if the wizard is on hand to attempt to carry out the task set before him, and if he isn't then the program kindly informs the player of this fact before going off to line 10 again as usual.

Line 2359 is the start of the main chunk of code for this particular verb, and you'll note that the initial thing that it does is to set the "ss" variable to 0, indicating that Strombrigner has been spoken to and that he can stop pining for the pub for a while. Then, if the player has typed in SAY TO STROMBRIGNER "FOLLOW ME" the old wizard just grumpily complains that he is here, he is here, and we go to line 10 again. This, however, does keep the wizard by your side for a little bit longer before rushing off to the pub again.

Since he is quite a touchy old fellow line 2360 tells the player that he is thinking about it, and sets up a little delay using the aforementioned line 2428 (It's just FOR i=1 TO 3000;NEXT;RETURN). Lines 2361 and 2362 are a miniature parser, and they attempt to unravel the player's request by splitting it up into a verb and a noun. If the player has only entered one word, line 2362 prints up message number 150, which is something to the effect that the wizard doesn't understand one

continued on page 37

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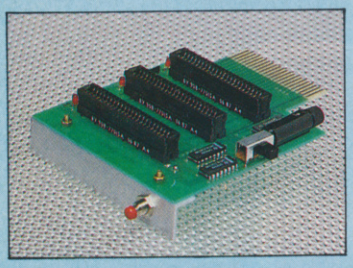

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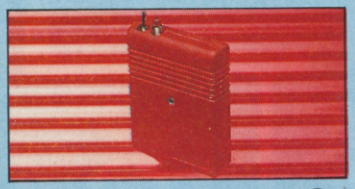

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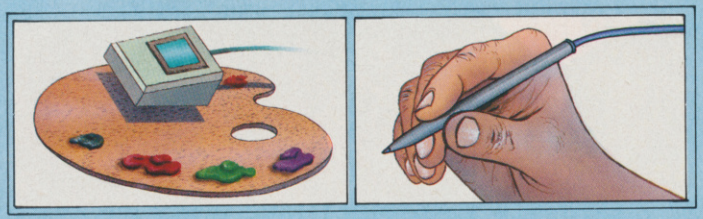

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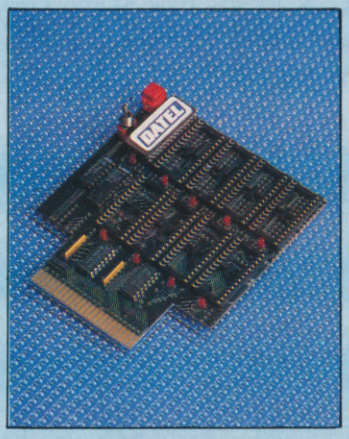

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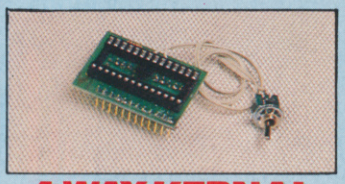

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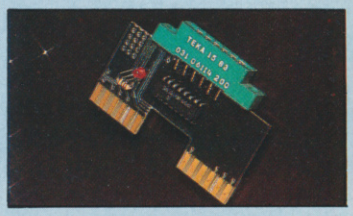

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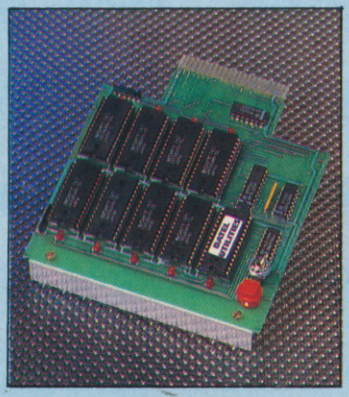

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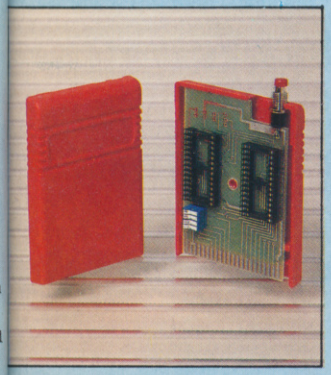

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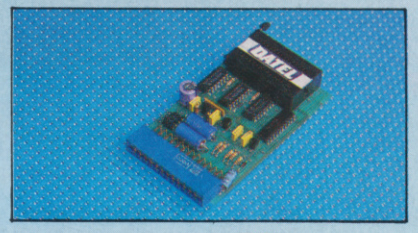

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- Full feature system – all functions covered including device check/verify.
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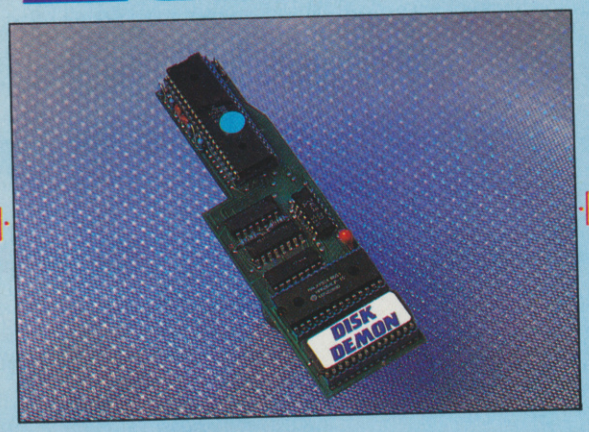
DATEL ELECTRONICS



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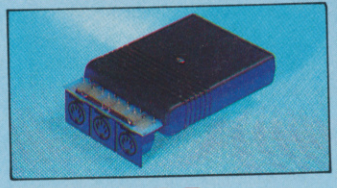

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A Full Midi Interface for the 64/128 at a realistic price

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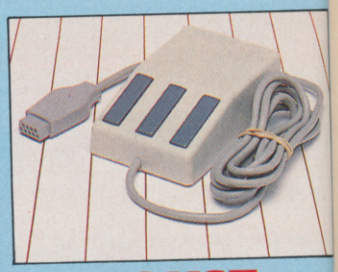

MOUSE

- ❑ CBM 64/128 mouse.
- ❑ Wide compatibility with software including: Blazing Paddles.
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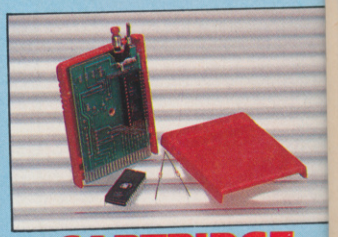

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Figure Three

```
2350 IF MID$(cm$,6,6)="tetley" THEN 6000
2351 IF MID$(cm$,6,5)="potzz" THEN 6010
2352 FOR i=1 TO LEN(cm$)
2353 IF MID$(cm$,i,1)=CHR$(34) THEN talk$=MID
$(cm$,i+1,LEN(cm$)-i-1):GOTO 2356
2354 NEXT:GOTO 3864
2356 man$=MID$(cm$,8,5)):IF LEFT$(man$,2)="me
" THEN PRINT x$;talk$;x$:GOTO 10
2357 IF man$<>"strom" THEN 2390
2358 IF wf=0 THEN PRINT"He's not here.":GOTO
10
2359 ss=0:IF LEFT$(talk$,9)="follow me" THEN
PRINT x$;"I'm here, I'm here!";x$:GOTO 10
2360 PRINT "He's thinking about it ...":GOSUB
 2428:FOR i=1 TO LEN(talk$)
2361 IF MID$(talk$,i,1)=" " THEN vb$=LEFT$(ta
lk$,i-1):na$=MID$(talk$,i+1):GOTO 2363
2362 NEXT:mess=150:GOSUB 5990:GOTO 10
2363 PRINT:PRINT"He might ...":GOSUB 2428:IF
vb$="go" THEN 2387
2364 IF vb$="cast" THEN 2380
2365 vb$=LEFT$(vb$,5):FOR i=1 TO nv:IF vb$=vb
$(i) THEN vb=i:GOTO 2367
2366 NEXT:mess=7:GOSUB 5990:GOTO 10
2367 IF (vb=19 OR vb=20 OR vb=22) THEN mess=1
11:GOSUB 5990:GOTO 10
2368 IF vb=14 THEN PRINT x$"Do it yourself."x
$:GOTO 10
2369 mess=7:GOSUB 5990:GOTO 10
2380 IF na$<>"spell" AND na$<>"a spell" THEN
mess=10:GOSUB 5990:GOTO 10
2381 IF cp<>37 THEN mess=126:GOSUB 5990:GOTO
10
2382 IF cs=1 THEN mess=127:GOSUB 5990:GOTO 10
2383 IF vp<1 THEN mess=128:GOSUB 5990:GOTO 10
2384 IF vp>4 THEN mess=129:GOSUB 5990:GOTO 10
2385 sc=sc+90:mess=6:GOSUB 5990:cs=1:p%(37,2)
=38
2386 GOSUB 2428:GOSUB 2428:PRINT:PRINT:PRINT
"BOOM!":GOSUB 2428:PRINT:PRINT:PRINT:GOTO 44
2387 IF na$<>"east" THEN mess=130:GOSUB 5990:
GOTO 10
2388 IF cp<>35 OR bt=1 THEN PRINT x$"Not righ
t now."x$:GOTO 10
2389 ab=1:sc=sc+90:mess=110:GOSUB 5990:p%(35,
3)=36:bt=1:GOTO 10
2390 man$=LEFT$(man$,5)
2392 FOR i=1 TO nn:IF man$=na$(i) THEN na=i:G
OTO 2396
2394 NEXT:mess=133:GOSUB 5990:GOTO 10
2396 IF na<>7 AND na<>8 AND na<>9 AND na<>17
AND na<>19 THEN mess=74:GOSUB 5990:GOTO 10
2397 IF na<>30 AND na<>31 AND na<>55 AND na<>
62 AND na<>34 THEN mess=74:GOSUB 5990:GOTO 10
2398 PRINT"You are ignored.":GOTO 10
```

There are only really two things that the wizard can do, those being to GO somewhere and to CAST a spell, so if either of these are the case we go to line 2387 and 2380 respectively. Otherwise, another little parser comes into play and lines 2365 to 2366 sort out what verb has been entered. If it is a recognised one then we carry on, otherwise print out a message that the wizard is not going to comply and shoot off to line 10. If it is a known verb, and it happens to be verb number 19, 20 or 22 (these being GET, TAKE and CARRY), then a message about the wizard not being raised by his mother to be a carthorse is printed up. Verb 14, OPEN, gives us a "Do it yourself" message, but if none of these conditions are met then the stock message about not complying is used and we retreat, as always, to line 10.

Lines 2380 to 2386 are all about casting a spell, and if the player has not typed in CAST A SPELL or CAST SPELL then line 2380 sends him packing with a suitable message. You have got to be in room 37 for the wizard to be able to cast a spell anyway, which is what line 2381 sorts out, and you can't be greedy and have more than one cast for you, which is what line 2382 deals with.

Line 2383 concerns itself with the number of times that the wizard has visited the pub, and if he has not ever been there after your initial meeting then his hands are shaking and he can't do it. Line 2384 tells us that if he has been there more than four times then he's too drunk to cope, but all being well he will cast a spell and open up a new route for you. Thus we increment the score, set the cast spell variable "cs" and change our map of the game by altering P%(37,2) to equal 38; this, as you may recall, will now allow the player to go south from location 37 to location 38. As location 38 cannot be visited until this is done, we have already set P%(38,1) to equal 37, allowing the player to go out again. Line 2386 is just a theatrical effect!

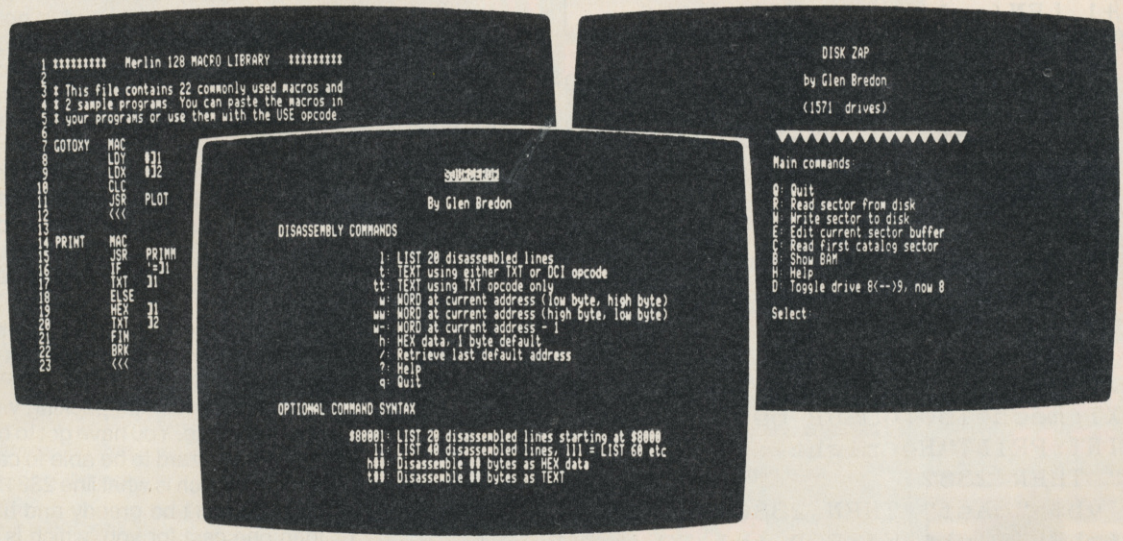
Before we set the wizard moving, a word of warning. Some of these lines are on the long side, and it is a long-standing programming habit of mine to always tokenise keywords when I'm entering them. Thus we have ? instead of PRINT, G shifted 0 instead of GOTO, and so on. A bad habit I know, but it does mean that you can get an awful lot of code in the one line. So, if you think that a line is too long then go back to the start of it and tokenise everything you can possibly tokenise. They all fit in, honestly!

But enough of these warnings, and back to the plot to see how Strombrigner copes with moving.

This is dealt with by lines 2387 to 2389. Without giving away the problem, you basically have to get the old boy to go east at one point, because if you go east (and, being kind to the player, you can still sort out this particular problem after you have gone east and got yourself into all kinds of

continued on page 46

MERLIN



A brand new complete assembler system for the 128 from the U.S.A. using the 1571 and 80 column mode! With a name like Merlin one conjures up images of the Knights of the round table etc. Well, this assembler will provide many nights around the square screen performing real magic.

Merlin 128 is in itself a complete system with many more aspects than just an assembler program. We have an extremely powerful macro assembler program dedicated to the 128. Best of all, like any powerful tool, it makes programming a breeze for the novice and pro alike. Merlin is a menu-driven assembler consisting of the editor/asssembler plus numerous demonstration and utility programs to make one of the most friendly and easy to adapt to systems around.

The experienced programmer can easily get straight into Merlin and will soon realise the immense power and versatility of this system. It has so many facets that the user will never grow out of it. Newcomers to assembly looking for a package to begin with can do no better than choose this package as the first time programmer is well catered for.

Merlin 128 includes over 20 additional sample and utility programs such as Xref which generates cross reference listings of all labels and addresses within the source program. Alt kets and Key defs allow you to create your own keyboard command macros and function key assignments. This handy utility already includes 36 predefined macros for your convenience.

Copy and Zap, a 1571 disk copy and complete disk editor program using one or two drives Hi-res and Swish are demonstrations of fast, hi-res graphics line drawing and plotting routines. Ram Test, a RAM testing program that uses the hi-res screen and 80 column mode.

Merlin 128 supports over 50 assembler directives for extreme programming flexibility in data storage, string definition, checksums, cycle counts and it also provides support for local and global labels or entry and external label definitions for use with the linker program.

Linker is a system for generating relocatable object code, which caters for multiple input and output files. For the beginner there is a very nice introduction into the workings of Merlin from its 146 page users manual. Clearly written and well laid out it quickly becomes the users reference guide. The spiral bound manual when opened lays flat so as to make referring to a particular subject or page easy. There is a pull out page which contains all the screen editor commands to keep handy and for easy reference. All the commands are listed, 49 in all!

The mark of a really good assembler is a versatile editor, just as in any good magazine folks! Merlin has a full screen editing system offering all the usual commands and more such as cut, copy, global find and replace, goto label etc. Printouts or listing are page formatted with headers and page breaks.

The assembler has incorporated into it many very advanced features such as the macros (which can be nested) and on-line macro libraries. The macro library contains over 20 commonly used macro definitions and fundamental operations such as add, subtract, print, increment, swap, set pointer, compare address and goto x,y etc.

There is also a sophisticated disassembler called the Sourceror. It is delightfully simple to use and create Merlin automatically.It assigns labels (from a list which you can edit) to all recognizable addresses.

There is a complete set of file management commands to help the programmer load and save files as well as load and save source, catalogue disks, append files, change drives, run program and more.

Merlin 128 has to be in my opinion THE most powerful and comprehensive assembler available for the 128. If you are fed up with the limitations of your assembler or buying for the first time, look no further, here it is. Merlin source try this with your chips!

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Adventure

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COMMENT

Something of a treat for you all this month as I met with Fergus Mcneill and Anna Popkess of Delta 4 fame who gave me a preview of **MINDFIGHTER**, their new serious adventure and expounded a few interesting views while they were at it. On the new release side we have **WOLFMAN** hot off the presses, **SLOANE** and a trio of games from a mail order adventure house called **ATLAS**.

To start with though I would like to initiate a debate. The question is whether or not you class Role Playing Games as true computer adventures that compete with the text and graphic variety. I am sure that there is a percentage of readers who prefer just puzzle laden stories, and there is a percentage who only like classic D and D thrust-and-kill, monster-bashing adventure. There is also a section in this for people like me who like both, as I am quite at home playing say **ULTIMA** as well as **ZORK**. Personally I do not feel that computer role playing has come of age yet, as up to now the graphic element has tended to be functional rather than realistic in order to leave enough memory for the complex spell and dungeon generation. So what we are left with are little stick men that float about a maze or a marsh and come across other little stick monsters and begin a melée. Treasure is found normally by defeating the said monsters and the amount is randomly generated by the computer. Where games like **ULTIMA** and **PHANTASIE** win out is in the puzzles that are built into the games. In these cases the authors have dreamed up some ingenious devices to thwart all supposedly good role players, and only a combination of Electronic Arts is releasing a game called **RETURN TO ATLANTIS** which will be a graphic adventure involving 14 different sub plots. The player as an Agent for The Federation has to complete all these missions in order to discover the lost City of Atlantis. The plot ranges from the Baltic to the Carribean to the South Pacific, and each location presents an environment rich in detail containing unique underwater life and seascape in a colourful setting. The movie-like presentation also contains an emotional robot **RUF** (shades of planetfall!) and a shipboard computer called **ART**. Coming to a screen near you soon.

Powerful magic (learned after many hours of play) and top class weaponry (made available to higher classes) can the obstacles be overcome.

Role playing games can take months to complete, even if you know the best way through, because of the random monster generation. You need a fair amount of luck to get where you want to go in one piece. At the present time, playing computer role players can be a tedious business, due to the constant disk access and the updating of party members and such like. With computer text adventures the ball is on quite a different foot. They have now surely come of age, as parsers have become more powerful and character interaction more intelligent. No longer do we have to put up with the old Scott Adams verb/noun input and just play guessing games with the vocabulary. The enormous advences that Level Nine or Magnetic scrolls have made ensure that we can speak to our computers in almost everyday language. That in itself is the strongest reason that adventure plots have become so much more complex, using other characters within the game to overcome puzzles as well as your main character. The computer text adventure has been around now for a good few years, and has a head start on RPG's. This will tell if D and D will get better.

Those are my views. Write and tell you *your* reasons for liking one or the other or both, and we will see if we can find some answers to Adventure, RPG or Text. Write to me at CCI 40 Bowling Green Lane, London EC1.

ADVENTURE NEWS

Top award for Anglia's "KNIGHTMARE"

Anglia Television's innovative adventure game Knightmare has won a major international award. The computer based

programme took the Jean d'Arcy International Award for Video Production. The games designer Tim Child will make a new 13 part Knightmare series for the Autumn.

Destiny in search of the Yeti
Destiny Software, the new house run by Francis Lee (ex beyond and others too numerous to mention) is releasing a game based on the search for the fabled Yeti, in conjunction with an expedition headed up by Chris Bonington.

Level Nine sign with Mandarin
The boys at Level Nine, since severing links with Rainbird, after some rather nasty squabbling as reported here in February, have signed a distribution deal with Mandarin, a newly formed division of Database Publications. Their first release under the new label will be the long awaited Time and Magik trilogy which contains Red Moon, Lords of Time and Price of Magik. Good luck this time around boys, see you at the Devils Inn for a noggin.

MAILBAG

Dear Andy
Just writing to thank you for your review of my adventure "SOUP" in the March issue. The comments and advice have been of great help for me in realising how and where I can improve. I have since played The "ASTRODUS AFFAIR" by my friend and rival Mark Turner and for what it is worth, I liked it too!
Derek Morris, Swansea

Come on Derek show us you can do better than Mark.

Dear Andy
I am in deep trouble. In Hitchiker's Guide I am stuck in the beginning. After the first hike I end up somewhere dark. Whatever I type I get the same feedback, you don't hear or feel anything etc.. I have the towel. In the Pawn, how do I kill the snowman? Where is the lead, and how do I move the wheelbarrow? Third is Faery tale, I have found the Swan on Swan Island but can't use it.
Roger Mynre, Norway

The snowman keeps coming up doesn't he, so this is positively the last time I shall tell anyone about it!!! Give him the three colours that will warm him up. The lead is found in the mine after you descend in the lift, but make sure you have something to hack it our of the wall with. As for Faery Tale, you need to go to Grimwood and defeat the witch. Once she is dead, she will leave behind a golden lasso.
WHILE WE ARE ON THE SUBJECT OF FAERYTALE . . .

Dear Andy
For the last few months I have been playing Faery Tale. I have found four of the five statues needed but the last eludes me. The found statues are at Seahold, Vermillion, Mairhem, and in the swamp. Please can someone help?
Arthur Laughton, Woodhall Spa

Anyone care to help Arthur with the missing statue?

Dear Andy
I am totally stuck on Pirate Adventure. So far I have managed to get to Pirates Island and collect all the objects except the shovel and lumber from the crack. How do I get off the Island and get to treasure Island.
Ian Williams, Liverpool

Scott Adams is not one of my all-time favourite adventure writers, but in the interests of dedicated journalism I played all of them. It is important that you get the shovel and lumber as you need to dig at Treasure Island and the lumber will provide the means of transport somehow. You have to wake up the Captain back at the flat and get him to sail to Treasure Island with you.

Dear Andy
First of all, let me thank you for a brilliant adventure section. Second, please help me; Guild of Theives, how can I get the chalice in the bears cage? Uninvited, how can I kill the giant spider under the altar and how do I get in the dome? Déja Vu, I have found the woman in the trunk, how do I get her home? Arazoks Tomb, how do I kill the snake? Please answer this letter as it is of vital importance and keep up the good work.
Ivar Nostvik, Iceland

Welcome to England, Ivar. The bear needs to be given some rather nasty food which will not be good for him, and in Déja Vu, you need to get the antidote for the sleeping women which is found in the doctor's surgery, in his dispensary cupboard. Arazoks Tomb . . . never heard of it! Has anyone else?

ADVENTURE HINTS

I HAVE A TREAT IN STORE FOR YOU, BARDS TALE FANS. STARTING THIS MONTH I HAVE SERIALISED ALL THE DUNGEON MAPS FOR YOU WITH SOME EXPLANATIONS ON HOW TO GET THROUGH THEM, BUT FIRST A NOTE ON SKARA BRAE . . .
The actual quest in Bard's Tale is to destroy the Wizard Mangar, but before you can even attempt to face either him or his cronies, you need to gain battle experience. This is a must before attempting any of the dungeons. The first port of call is the Inn called Scarlet Bard, which is located next to the house at Rakhir Street. The bar keeper requires gold to loosen his tongue, but when he does loosen it many cryptic clues will

continued on page 42

128 SPECIALISTS

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The new Commodore 1581 1 megabyte disk drive is now available for the C128 or C64. This drive has been designed for large data users, it offers 3,160 blocks free, 8,000 bytes per second (31 blocks) loading rate. Software for this drive includes CADPAK, CHARTPAK, Oxford Pascal, Hackpack, Petspeed, GEOS, etc. Using the CANNON or Super 81 Utilities most software can simply be copied to the 3½in disks. **The drive is available for only £199.95.**

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Disk Librarian will catalogue up to 1,000 disks and 15,200 programs into seven categories, games, archival, education, communications, productivity, CP/M and utilities. Printer reports include library index, full library report, master program list, category program list and Dir labels. Includes ultra-fast search and sort capabilities. **Super Disk Librarian 128 only £29.95. C64 Version £19.95.**

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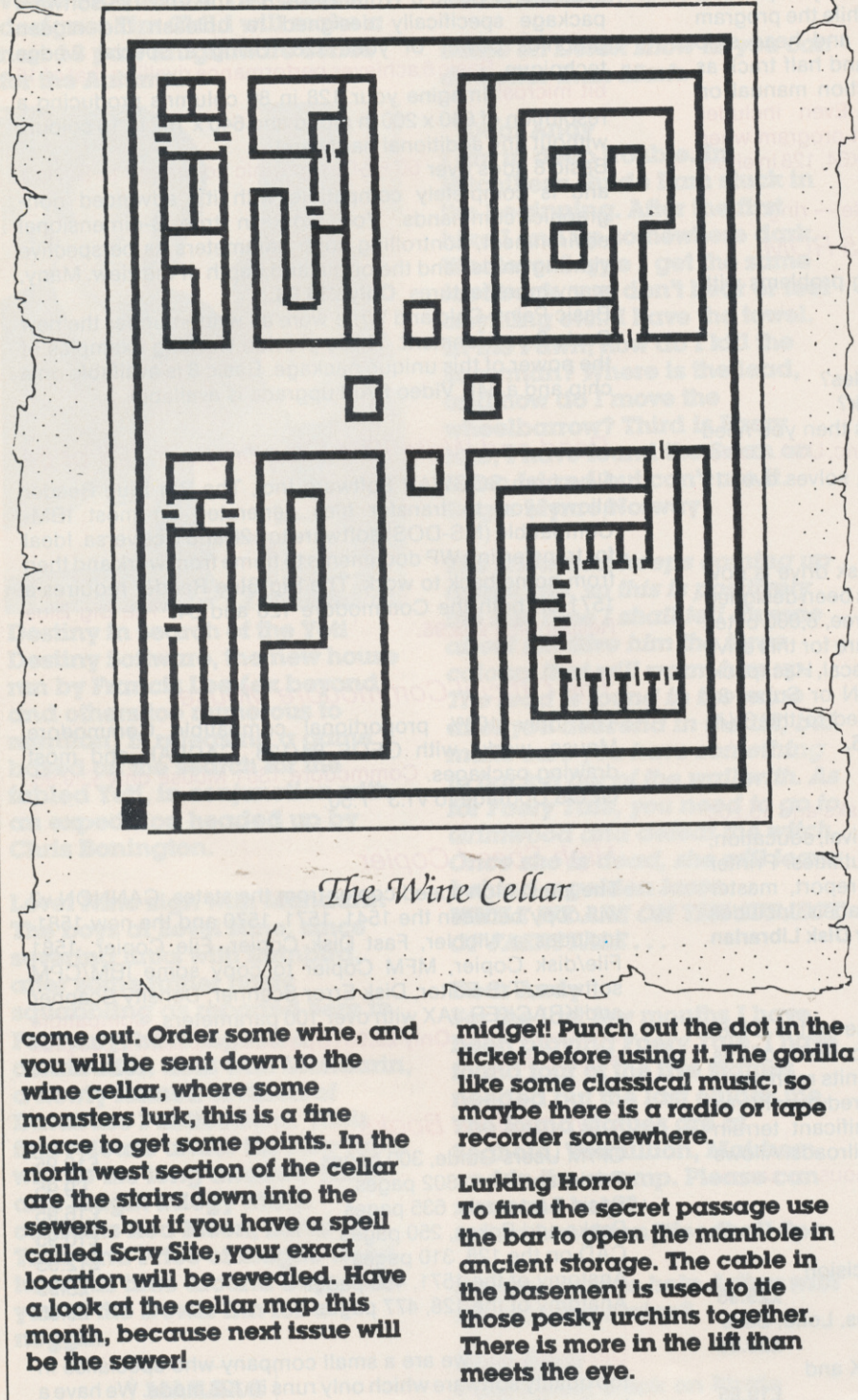

The Wine Cellar

come out. Order some wine, and you will be sent down to the wine cellar, where some monsters lurk, this is a fine place to get some points. In the north west section of the cellar are the stairs down into the sewers, but if you have a spell called Scry Site, your exact location will be revealed. Have a look at the cellar map this month, because next issue will be the sewer!

Spellbreaker
To get the cube from the Roc next you need the magic carpet, and to get the cube from the Idols mouth use Malyon then Espnis spells.

Ballyhoo
To get past the guard, breathe in gas from the balloon to make your voice sound like the midget! Punch out the dot in the ticket before using it. The gorilla like some classical music, so maybe there is a radio or tape recorder somewhere.

Lurking Horror
To find the secret passage use the bar to open the manhole in ancient storage. The cable in the basement is used to tie those pesky urchins together. There is more in the lift than meets the eye.

Hollywood Hijinx
Some swimming is called for, but the matches get wet! Cover them with wax to keep them dry.

ADVENTURE PREVIEW

MINDFIGHTER — ABSTRACT CONCEPTS

When I got the call from Activision (which is something of a miracle these days) that my presence was requested for a preview of Fergus McNeill and Anna Popkess' new "serious" adventure Mindfighter, I dropped everything and rushed round to their swish Hampstead HQ. Ever since the days of Bored of the Rings and that adventure about the ZX microfairs I have had a fond fascination of Fergus' work. Mindfighter was written by Fergus wife Anna based on her book, and as he was revamping the adventure writing system anyway, thought it a good idea to use Mindfighter as the first release on the new system. "The system is called SWAN" said Fergus "which stands fro 'system without a name'. I found the quill too dated for my needs and so had to devise a system which would really contain all the things we would like to have in adventures, like character emotions, real time, no nonsense key shuffling, if you're carrying the right key you can just go in. Stuff like that which is all time consuming for players is a real drag". Seeing these two take me through the game, it is obvious to me that they almost live and breath it, in fact Anna really gets caught up in the characters plights. "All our characters have emotions, not simple artificial intelligence but real programmed emotions that will respond to a given situation. My favourite is Daryll who is retarded but will be your lifelong friend if you give him something he likes. I was playing last week and Daryll was killed by another character, I cried for days".

Mindfighter is about an 11 year old boy called Robin who has exceptional psychic powers. One day, he awakes to find himself in a post nuclear holocaust England. His mind has transported him into the future, where he realises that evil forces are at work forcing the survivors into an extreme fascist regime called The System. Robin realises that the only way to stop them, is to return to the present and prevent the Third World War

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from actually taking place. His mind then again gets him back and he makes a last desperate attempt to save the world.

The real time factor is in fact very real, as the happy couple actually canvassed Southampton (the location for Mindfighter) to find out just how long it takes from one location to another. The screen layout is mostly icon controlled making the handling very fast indeed, and all text can be entered using TT or THEM or GOTO or GET ALL EXCEPT. The graphics are truly atmospheric and really give a wild impression of life in a bleak war torn city. Forget any humour here, no Delta 4 fun, Abstract was born for serious yet entertaining adventures, and I for one applaud them for doing so. Mindfighter is a great piece of work, read the book (it is included in the package, and contains many hints for solving the game) load it up and enjoy.

ADVENTURE REVIEWS

The case of the mixed up Shymer
Atlas Software, 24 Maes Y Cwm Llandudno, Gwynedd LL30 1JE
£1.99

Sandra Sharkey who penned this work, has been mentioned in the column before, as she runs the Adventure Probe fanzine. One of her closest friends Mandy Rodrigues who is another adventure nut, has decided to team up with her and collect all the well written GAC/QUILL/PAW adventures, and market them under their own label Atlas. In fact she sent me three adventures, Sandra's MIXED UP SHYMER, BLACK NIGHT and BARNEY BROWN and the CHICAGO CONNECTION. Shymer is all about the land of Nursree where all the famous nursery rhyme characters are doing odd things that really they shouldn't be. Having arrived in this crazy, mixed-up world, you set about putting things to rights. It is supposed to be just a fun game, with some amusing moments in it, and I can vouch for the fact that even I smiled a lot!! Baa Baa white sheep and Wee Willy Winkie were my favourites, but I suggest you invest £1.99 and find out for yourself. Sandra has said to me that this is aimed at introductory level players, although rumour has it that she is currently hard at work on a biggie . . . but that is another story. One slight hiccup, going north from the garden led my copy to crash at system 36704, so investigation is needed. Black Knight is a more traditional adventure and is set in medieval England where a Black Knight is wreaking havoc among the kinsfolk. The King has entrusted you with the task of finding the evil one and defeating him to set everyone free.

What I liked about all these games was that no objects were just lying around, you needed to search thoroughly everywhere to find what you need. There were bugs though, and I must stress that these should be looked out for. In my copy I could not examine the shelf, even when standing on the box. Barney Brown is a present day spy spoof with you cast as a guy pitched in a mystery to find your buddy. All these adventures are two players, and hint sheets are available. All in all an impressive start, and I look forward to some more girls.
Personal rating 7

Wolfman
CRL £8.95

Another Rod Pike special has arrived in the guise of Wolfman. Rod obviously enjoys a good horror story, what with Frankenstein, Dracula the Pilgrim and now this one. The graphics are the same gory detail as past works, and not unlike Jack The Ripper. It includes a picture of the sexy Nadia Headlines who apparently volunteered to have several very unusual things done to her and then the photo of it was digitised. Nadia is obviously quite a girl! This is a three parter, with part one is about a young man's realisation that he is Wolfman and that somehow he must learn how to get rid of this curse. One horrendous puzzle in this section centres on a display case with a nasty lock, I bet you get stuck. Part two is a split with you taking the part of a girl and the young man/wolf who find love but are tragically split apart when she is kidnapped. Part three is the hunt for the girl and the quest for a monastery that holds their salvation and cure . . . if it exists.

What Rod Pike does best is

long descriptive narrative combined with some ingenious puzzles. What is a bit disappointing is the lack of advancement in the writing system, which hasn't changed in two years. Still only two word answers can be used, and no IT or I, you still have to type INV for inventory. Come on Rod wake up a bit to the modern world eh?

That said, Wolfman is another chilling episode in adventure horror.
Personal rating 8

NEXT MONTH I WILL LOOK AT SHERLOCK FROM INFOCOM, AND MIGHT AND MAGIC FROM ACTIVISION, UNTIL THEN KEEP THAT MIDNIGHT OIL BURNING AND YOU MIGHT JUST FINISH THAT ADVENTURE TONIGHT!

Adventure!

Super Disk Utilities

Bob Collyer evaluates this new aid for the C128 and 1571 disk drives.

I suppose that just about every serious C128/1571 owner will already possess at least one set of utility programs. Can any single disk come close to matching the overall capabilities of this one? There is of course the original 1571 Test Demo disk supplied with the drive and it is a very useful aid to the user helping to make easy the transfer of files, formatting, copying, re-ordering directories etc. This is just the kind of utility package needed to start life with the 1571. As we progress so do our needs for a more powerful and comprehensive set of utility programs.

A new disk called Super Disk Utilities (SDU) is now available in this country, thanks to Financial Systems Software. This is without a doubt one of the most powerful 1571 aids around. The program runs in 80 columns mode monochrome. A second drive, though not necessary, is fully catered for.

The aim of SDU is many fold. A menu-driven system guides you through the various utilities quickly and easily. A continuous promt shows what is going on and what options are on hand. The disk allows you to format and copy whole disks with either single or double drives, perform many CP/M and MS-DOS utility functions, edit any track or sector, perform every DOS function, change disk format without affecting data. Lock and unlock files, write protect files, create autoboot files etc.

"It is true to say that since I have owned this disk it has taken pride of place right up the front."

SDU helps also to learn the inner workings of the 1571 with a memory monitor and a unique RAM writer. With these options you can assemble or disassemble any section of RAM or ROM. It is possible to use the RAM writer to program the 1571 yourself. SDU performs many MFM functions including formatting or analyzing MFM disk formats, it will also format in CP/M+ (GCR format) and read a CPM+ directory without switching to CP/M mode.

In fact there are so many features on this one disk that you will probably find that this will take preference over all your previous utility disks. I have found that during my own work I keep the most frequently used disks to the front of my box file. It is true to say that since I have owned this disk it has taken pride of place right up the front.

SDU will perform virtually every CBM DOS function. I must say that I have found all the operations very easy to perform. SDU will copy both 1541, 1571 and CP/M+ formatted disks. A unique feature is the ability to copy a 1541 formatted disk onto a 1571 formatted disk and vice versa. Using a single drive the average disk can be copied in two passes depending on the amount of data. Up to 50 consecutive files can be handled in one go, all CBM standard file types can be copied DEL, USR, SEQ, PRG, and REL.

How about MFM formatting? Selecting the option will display a list of user selectable perameters which can be manipulated to format disks in any configuration imaginable. The default values displayed are for the Osborne DD format. This format is recognised by the 128 in CP/M+ mode. Read and write operations occur much faster in this format than with GCR formatted CP/M+ disks. This means that you can copy four .COM and data files (using PIP) to an Osborne DD disk and gain much much faster disk access. Most useful for database programs that scan large amounts of data.

The 1571 DOS utilities use very powerful routines so be warned if using them on commercial software it is possible to ruin your favourite software, so look out! Files can be scratched, renamed, write and copy protected it is even possible to change the format without affecting the data. This sometimes eliminates the delay whilst the 1571 shifts to 1541 or has trouble recognising a 1541 flippy.

Another feature of SDU is to reset drives or change default drive, trash a track or bulk erase a disk and or course all the usual DOS commands are available.

The 1571 drive monitor allows you to view any part of RAM or ROM. Additionally, the Drive monitor includes a full featured ML monitor that supports all the 128 monitor commands. Using the ML monitor you can automatically disassemble any section of RAM or ROM and even save it to disk as a binary or word processor file. The possibilities are endless. You could take your disk file, improve it and use the RAM writer to load and run it in drive RAM. The drive and ML monitor are like the disk editor. They are tools to help you learn the inner workings of the 1571 drive.

SDU comes packaged with a sixteen page instruction manual, my only criticism here is the presentation, as it appears to be rather drab in just black and white, though this does not detract from the fact this is the most functional disk you'll probably ever possess. The publishers are Free Spirit Software from Illinios, U.S.A. ***B.C.***

SDU is another very useful dedicated program for the 128 and is available from:

Financial Systems Software, 2nd Floor, Anbrian House, St. Marys Street, Worcester WR1 1HA. Tel: (0905) 611463.

Price £24.95

Document Storage

Although optical disk storage systems are not yet replacing file cabinets in the general office environment, a booming market for the new technology exists in "paper-intensive" environments in the insurance industry, the banking industry, the federal government and in large engineering design offices. According to a 184-page research report from U.S. International Resource Development Inc., today's $400 million market for optical disk storage and retrieval equipment will approach the $2 billion level by 1992 as usage extends beyond the "vertical" market applications of today and into the general office environment. As the penetration of optical disk systems increases, much of today's market for microfilm-based systems will be displaced.

Meeting of the media

From the user's perspective, the news on optical systems is almost always good. Prices fall each year, and the capabilities and capacities of the systems expand. While the report notes that a standard, four-drawer filing cabinet can hold approximately 25,000 8½ × 11" pieces of paper the optical S&R system sold by Filenet (Costa Mesa, CA) can accommodate images equivalent to 280 file drawers of documents.

You can lead a horse to water, but. . .

The potential of optical storage technology is undeniable, but according to Buffham, vendors have to continue to overcome obstacles if they are to persuade users to enter into the process of upgrading and/or retrofitting their S&R and information management functions. It is still difficult to justify the cost and inconvenience to some users who are far more wary today about disruptions to their systems than they might have been five years ago. Add to this feeling the great deal of confusion in the marketplace about optical disk technology — WORMs, DRAWs, CD-ROMs, CD-PROMs, CD-I, laserdisks — and some users become reluctant to make investments in such apparently transient technologies.

Meanwhile, numerous new vertical markets for optical S&R systems are emerging out of the successes in government, banking and insurance, and already medical/health care, legal, real estate, transportation, education, law enforcement, communications, and architecture, engineering and construction (AEC) markets are opening up to the optical S&R vendors, according to the IRD report. One of the more intriguing areas involves satellite data storage. Eosat, a private operation that took over the Government's Landsat project in 1985, believes a solid core business exists in raw satellite data ad that considerable additional revenues will be derived from enhancing the data through the use of image processing and other techniques.

Further details on the $2,100,00 report (#730) entitled Optical Disk Document Storage & Retrieval Systems, from IRD 6 Prowitt St., Norwalk, CT 06855 U.S.A.; Tel: (203) 866-7800.

I·C·P·U·G

This month a few words about the Commodore show in June and ICPUG's part in it. ICPUG has now established a tradition of inviting Jim Butterfield to the show, at ICPUG's expense, so that Jim is available not only for our seminars or question and answer sessions, but also at our stand to welcome old and new members and answer their questions about the latest developments in the CBM world.

Our regional groups compete for the right to invite Jim to their club after the show finishes each day, and generally while Jim is in this country.

Because we have a large number of local groups only a few are lucky and get Jim. However, because we are a non profit-making organisation, they pay his keep for the day.

Some of the groups regularly invite Jim.

One of the largest is the South East Group who meet at Biggin Hill Library on Thursdays weekly, except the first of the month.

Jim has given a talk on the Friday evening of the show to them for many years now, and it is noteworthy that the largest club turnout of the year is when Jim Butterfield gives his talk to the members of ICPUG Southeast.

Jack Cohen

continued

trouble) you encounter difficulties. Being a wizard, however, Strombrigner can sort things out much better than you can, and hence the need to send him away.

Bearing that in mind, line 2387 checks to see that the player is specifying east, and if he is not then print up a suitable response before returning to our line 10.

Line 2388 ensures that we are in the correct location and also that the problem hasn't been solved already. If the player isn't in the desired place, or the problem has been dealt with, then we once more print up a suitable message and scuttle off back to line 10.

Line 2389, the player's crowning glory, means that we set this particular problem solved variable ("ab"), increment the player's score, print up the relevant message, open up the new route now available to the player, set the solution variable ("bt", as this problem can be approached in two different ways, only one of which works), and, yes, you guessed it, we then retreat to line 10 again to wait for a fresh input from the player.

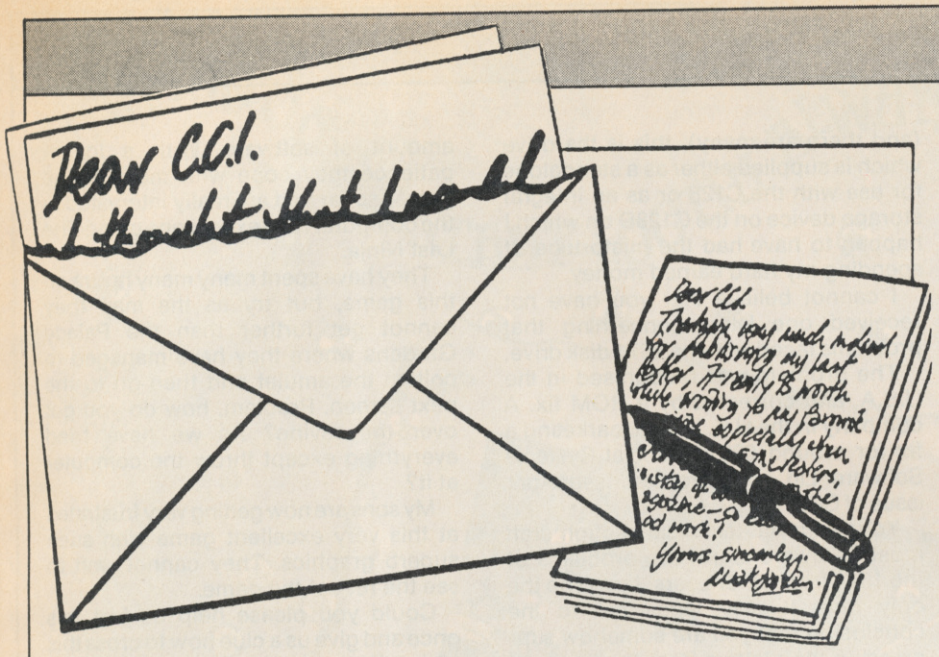
And that is all that the player can do when talking to characters. This only leaves us with lines 2390 to 2398, used for coping with attempts to communicate with people other than Strombrigner. Line 2390 settles what is contained in "man$", and then another small sub-chunk of the parser routine settles on who exactly the player is nattering away to. As with the talk routine we first of all eliminate the unknown (lines 2392 and 2394) before telling the player off for talking to inanimate objects (lines 2396 and 2397) before telling the player off for talking inanimate objects (lines 2396 and 2397) before, finally printing up a stock response to any request to talk to any character in the adventure other than Strombrigner the Grey. This is, as line 2398 tells you, a straightforward "You are ignored" message.

Conclusion

Characters are all-important to adventure games, and help add to the overall flavour of the game. If the character is there it is reasonable enough to assume that a player is going to try and communicate with that character, and hence the inclusion of SAY and TALK routines. Without them there is precious little point in including the character in the first place, unless he or she or it is there merely to add inconvenience (the pirate in Colossal Cave for example) or colouring, as is the case with Legless the Elf in the game from which these routines were taken.

And, as always, Infocom give us the standard to aim for. In Planetfall and Stationfall we have Floyd the robot, surely the greatest ever created for an adventure. Oh, what a hero! You MUST play those games.

Bye for now. ***P.G.***



Dear CCI
First of all I want to say that C.C.I. is the best computer magazine of all time.

As a Plus/4 owner since Christmas, I have found your mag very helpful. I have especially enjoyed the recent correspondence about the Plus/4. Why oh why have Commodore let us down with their support on this very excellent machine! It just seems ludicrous when the sales of their new Wonder Machine seem to be equal to the Plus/4.

It really grates my nerves when I see all the games etc. available for the C/64 and virtually nothing for the Plus/4. My only criticism of the machine is that nearly all the I/Q ports are none-standard. Perhaps in the year 2000 all computers will be compatable.

One idea that perhaps you will consider, is a section devoted to the Plus/4. How about it C.C.I. Judging from your mailbag recently, you could have a winner on your hands. I know that you will have at least one friend for life, ME.

Oh I have just remembered my second only beef with the Plus/4 and that is the fact that it is advertised as having some really good software built in, it is only when you read the manual that you find out that you need a disk drive to use them. Luckily I was able to buy a 1551 drive at a very good price. Still, I was a bit upset to say the least. Now all I need is a method of transfering all my cassettes to disk. Help anybody?.

Finally, sorry about all the spelling and typing errors but I am only 8 years old.

P.S. Please please lets have some more items on the really fantastic Plus/4. It really is the best V.F.M. machine in the market.

Yours Faithfully,
Craig Prescott, Middx.

Dear Craig
An 8 year old Plus/4 fan? The youngest around? We hope too that by 2000 A.D. all computers will be compatible and you will be 20 years old and just right to enjoy them! A Plus/4 section might still be useful then for you! What spelling and typing errors? Our spellchecker fixed them!

Dear CCI
I would just like to expand on one or two points raised in your editorial in the December 1987 issue. I think it would be reasonable to conclude from your comments that you see competition as a positive element of human nature and one that should be encouraged. First let me say that I agree wholeheartedly.

However, let me suggest to you that, in order to be successful, one must compete with one objective — to win! I am not a believer in the philosophy that playing the game is enough. In order then to encourage competition it is vital that the final results are made known. How many people would follow horse racing if they never knew the eventual winner?

This same vital component, knowledge of the winner(s), is surely applicable to competitions printed in magazines. I only enter competitions when I want to win the prize!

I have entered competitions in CCI on one or two occasions in the past and I have NEVER seen a list of winners printed for the particular competitions I have entered. Although from time to time you do print list of winners, should it not always be the case that readers can look forward to reading competition results and lists of winners in the issue following the closing date?

The last two competitions I entered were printed in your May 1987 edition both with closing dates of 15th June 1987. One was Brian Clough's Football Fortunes and the other was Mini Office II. I have read every edition since May and have not yet seen a list of winners.

I will end with a sentence borrowed from your above mentioned article. "...And I'm sure you agree that while competing may be fun, winning is the best fun of all!"

Your sincerely,
Paul B. Nash Cheshire

Dear Paul,
You make a very valid point. Competitions are much more satisfyig if you can see the results, especially if your name heads them! So we will be publishing more results in future. Nevertheless, 'competition' isn't always an unalloyed good. Competition may bring the 'survival of the fittest' but it can come at a hugely wasteful cost of losers. In a complex world 'co-operation' might be a better and more economical formula. The editorial was though making the point that competition is useful in uniting one group to overcome another especially in business. It is often necessary to bring the competitive drive out to get things done.

Dear CCI
With reference to your reply to the letter from Rodrigo Araya (Mar 88), I fear you have given a totally incorrect impression. It is NOT legal to retain a copy of a software program after you have sold the original. I am sure you will be aware that buying the software only buys you the licence to use the software. As soon as the software is sold to someone else, the licence to operate passes to the new purchaser and the person selling the software has no right to keep a copy or continue using the software. If this was not the case, it would be possible for a program to be sold twenty times legally, but leaving nineteen copies in the hands of previous owners. If you look at the licencing details included with the software this is made perfectly plain, but few people seem to bother to read the details on games packages. Mr Araya is afraid that his copies will look like pirate copies, but this is exactly what they are if he has sold the originals — you can't have your cake and eat it.

Yours sincerely,
Chris Durham, Blandford Forum

Dear Chris
You bring up a interesting point but a subtle legal brain points out that it is not against the law to possess a copy, legally taken of a program. It would be against the law to sell that copy but not to sell the original. As it was clearly not the intention of Rodrigo Araya (March CCI) to sell his copies but only the originals, it would be difficult to prove his guilt in this matter. Especially as when the copy was made it was legally taken as a back-up from his rightfully owned program!
The difficulties of these points illustrates the complexity of the position in what is called "intellectual property" which is far from being clear-cut legally.

Dear CCI
I am a Commodore Plus/4 owner and I have had plenty of choices to have 64 or 128 but I have refused them and this is my 3rd computer and why oh why does everyone laugh, at me when I tell them I have a Plus 4? Because I find this computer to be brilliant and with a built-in database 'fingy' and priced at only "79.95", well that is low isn't it?.

I have seen a lot of games on the 64 that are totally pathetic compared with the C16/Plus 4 version and you can get ons of games for the Plus 4.

Not as much as for the 64 or course but enough to have quite a healthy collection. Anyway before I go could you please (when showing newly released games) state whether they are available for the plus 4 as well. Thank you.

PS Can it be poss to get Spindizzy, Xcel, Arkanoid and especially Eprom cartridges for the C-16/Plus 4 and maybe a mouse-graphics package.
PS "again"! Ta for a great mag it's got what every Commodore owner needs (well what I need anyway), Thanks a lot.
Damian Janes, N. Wales

Dear Damian
Glad to know somebody still loves the Plus 4! We do always put which machine a game is for. No, so far Spindizzy etc. are not out for the C16' s or Eproms but you can possibly get a mouse package for the C16 but not in the U.K. we think. Why not write to Activision and ask them why they haven't done Spindizzy?

Dear CCI
I have just finished reading all of the letters, both to the editor and the technical editor.

I have been a Commodore user now for around 6 years, both at home and at work. I have worked on nearly all of the machines that Commodore have issued forth from the early PETs up to the C128D that I am now using which was a direct upgrade from my previous C64.

I read your magazine from cover to cover and have done for many ears, but I must say I did prefer the format originally adopted which I thought suited the more serious minded, the company for whom I work even have several issues per month on an internal circulation, but I fear it will not be for much longer since you are moving into a market which is now more suited to games players (no offence intended), hardly adaptable, or exploitable, to the working environment!

Still, I shall put off my cancellation of your magazine for a while yet, for it is not to you directly that I target my criticisms.

One thing which I cannot understand is that nobody has written to complain, or comment on the serious bugs that are resident in the operating system of the 1571 "double .sided" disk drive. As all owners of this item of equipment know, (and there are many), this is the drive which is supplied either as a standalone for use with the C128 or as an integral storage device on the C128D on which I happen to have had the misfortune of spending my hard earned money.

I cannot believe that you have not received one letter concerning that problems faced with the 1571 disk drive.

The problem was recognised in the U.S.A. and corrected by a ROM fix. A company in the U.K. is also marketing a fix for around £25 (Financial Systems Software Ltd. of Worcester, see April issue of CCI).

Your editorial/technical section staff must be aware about the problems of the 1571 from other users, I can't be the only one. It only leads me to the conclusion that you are somehow suppressing their letters from the pages of CCI.

So it is to you I throw down the gauntlet. For it is, I fear only the publicised feelings of the 1 million users that you quote in your editorial column which will push Commodore, in this country, into providing our rightful after-sales service.

If you a e suppressing the feelings of 1571 users by not allowing the publication of letters that would probably be damaging to the seemingly good reputation that Commodore has created for itself, then you are condoning their actions!

Have you enough bottle to take up the gauntlet?
Yours faithfully
Brian Springthorpe, Staffs.

Dear Brian,
We are often accused of heinous crimes regarding letters. Sometimes it is inventing them, in this case suppressing them. Neither is true. We get some nasty letters and we print them but if we don't get letters, we don't invent them.

And, believe it or not, we didn't get a single complaint about the 1571. We did however print in April CCI information about the fix, provided by ICPUG's Jack Cohen. We hate to accuse anyone of being paranoid but it often seems that our own problems ought to be shared by everyone else, when in fact, practically everybody else goes blithely on totally unaware. And material for the serious minded? There is plenty but it does not look dull which fools lots of people. And, by the way, we have plenty of courage, nerve, even guts but we don't like the word 'bottle'.

Don't you think it is unpleasant and when the language has so many synonyms, unnecessary?

Dear CCI
My two sons aged 7-9 have just acquired a C64 for xmas along with a considerable amount of software. With a lot of patience they cope with most of the games so far and are really interested in the computer now except one game The Last Ninja.

They have spent many many hours on this game, but try as the may they cannot get further than the Palace Gardens where they have managed to collect the amulet and then go to the next screen. Problem, how do you get over the ravine? As we have tried everything except throw the computer at it?

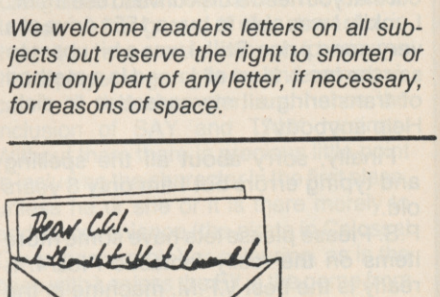
My sons are now getting very frustrated at this very excellent game with such superb graphics. They cannot wait to see the rest of the game.

Could you please help us just this once and give us a clue how to cross this ravine. We appreciate you may not want to disclose this information to all the world so if you want to reply privately that's fine with us.

And last but not least is to say what a fabulous magazine yours is. We have started to buy it regularly now as yours is without doubt the best mag on the market. Keep up the good work. We hope you can make two boys very happy.
Yours
M. Bond, Chippenham

Dear M Bond,
It sounds as if you are trying to go the wrong way. When you collect the amulet, go back the way you came. If you have trouble jumping back over the river, you should stand just above the patch of water on the path, and then make a short jump followed by long, short, long, medium and long jumps to reach the other side. When you get to the statue, put away your weapons, take out the amulet and walk up to the statue. This should get you safely to the next stage.

We welcome readers letters on all subjects but reserve the right to shorten or print only part of any letter, if necessary, for reasons of space.



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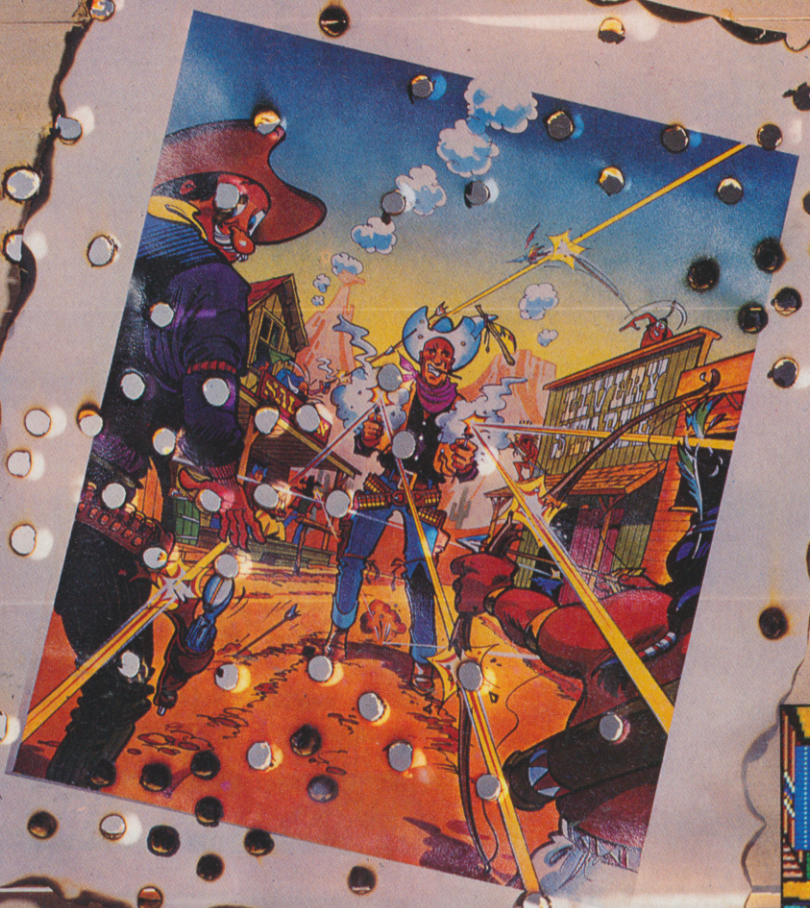

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Screen shot from CBM 64/128

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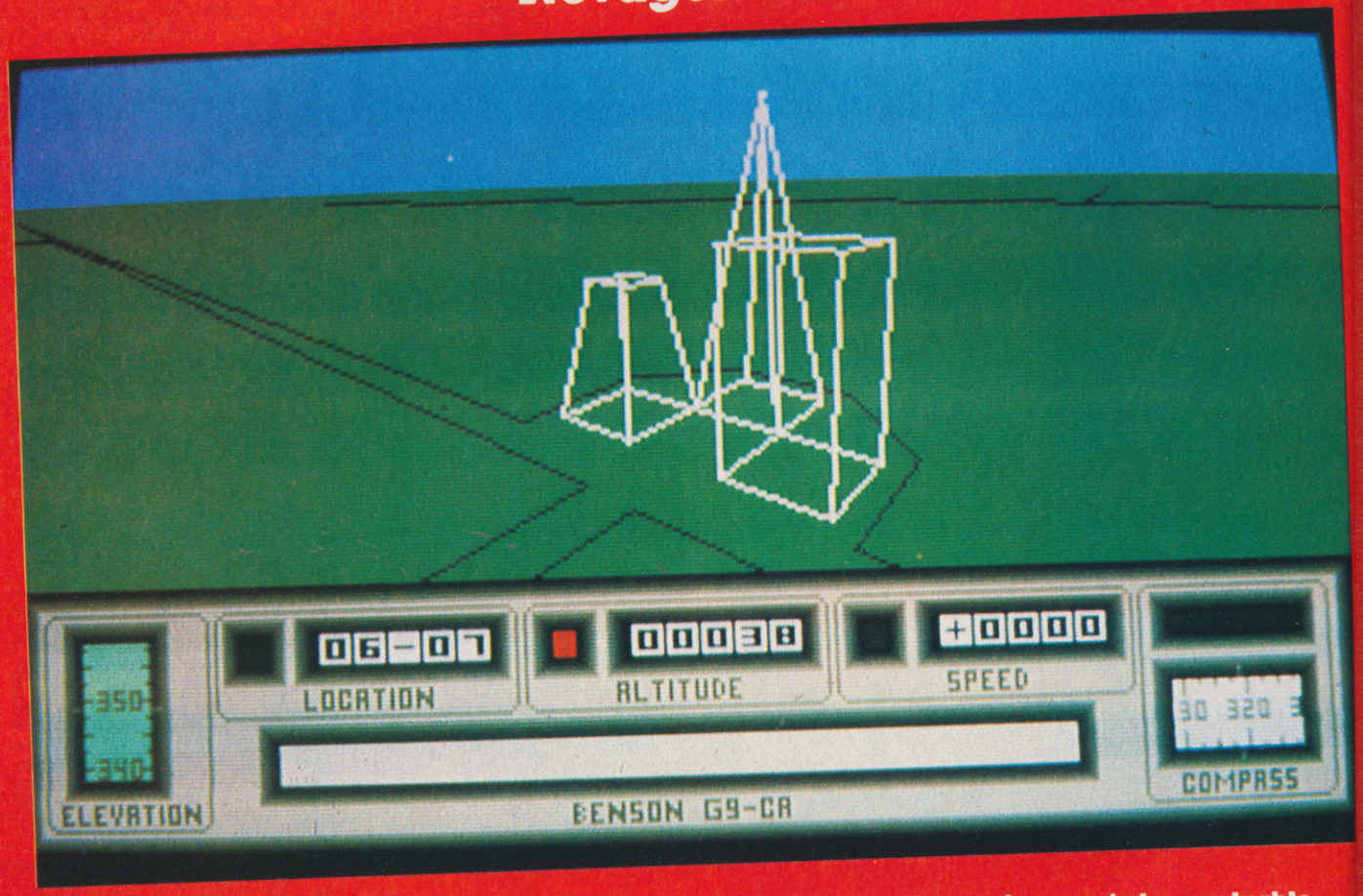


If you have owned a 64, +4, ST or Spectrum in the past, you probably know all about Mercenary. Every version was received with excellent reviews praising its speed and originality. Now, three years after the 64 release, the Amiga gets its own version. What potential is there for a three year old 8-bit game converted for the Amiga? If you are an ex-owner of one of the above mentioned computers, more than you might think.

In Mercenary there you were, taking a leisurely cruise through space, when your guidance system broke down. You are heading straight for the planet Targ at thousands of miles per hour with no way of stopping. The resultant crash landing leaves you stranded in the middle of a deserted city with no immediate means of escape. Luckily, you are not alone. Benson, your in-helmet PC survived the landing and proves to be a valuable source of information and assistance.

Two races are at war on the planet, the Mechanoids and the Palyars. Surprisingly, this works to your advantage; both are willing to have you on their side and will pay for specific tasks. This may mean destroying all the enemy buildings, or capturing the enemies' leaders. The nearby aircraft lets you explore the city from the sky (a lot quicker than walking). Flying around the city you come across a number of simple structures representing houses, trees, a stadium and a substantial amount of monuments and statues. Most of these structures are simple but the animation of some give them a great deal more realism.

Whilst Mercenary seems at first to be a flight simulator, the majority of the game and explora-

cenary

tion takes place in the underground complexes. These are accessed through lifts scattered around the city. The bare rooms and corridors contain aircraft and all sorts of helpful supplies to be used by you, or transported to appropriate locations for a reward. Keys have to be found to unlock doors and teleports provide an interestingly confusing element for the player.

"Keys have to be found to unlock doors and teleports provide an interestingly confusing element for the player"

The way to escape is not simply to find a craft powerful enough and fly off but work out what each object can do and explore every road, and room. Unlike previous versions, the game comes with the Targ survival kit. This contains maps and information on the game, some of which, such as the maps of the complexes, should only be consulted when you are really stuck. Not only are there the complexes and city to explore but also an orbiting complex in the sky to investigate.

If that is all not enough for you, there is an alternative city from which to escape. This has all the same features as the first but is laid out differently, resulting in a harder adventure. Switching between the two cities, attempting to escape from both could be very confusing, so I suggest you take them one at a time.

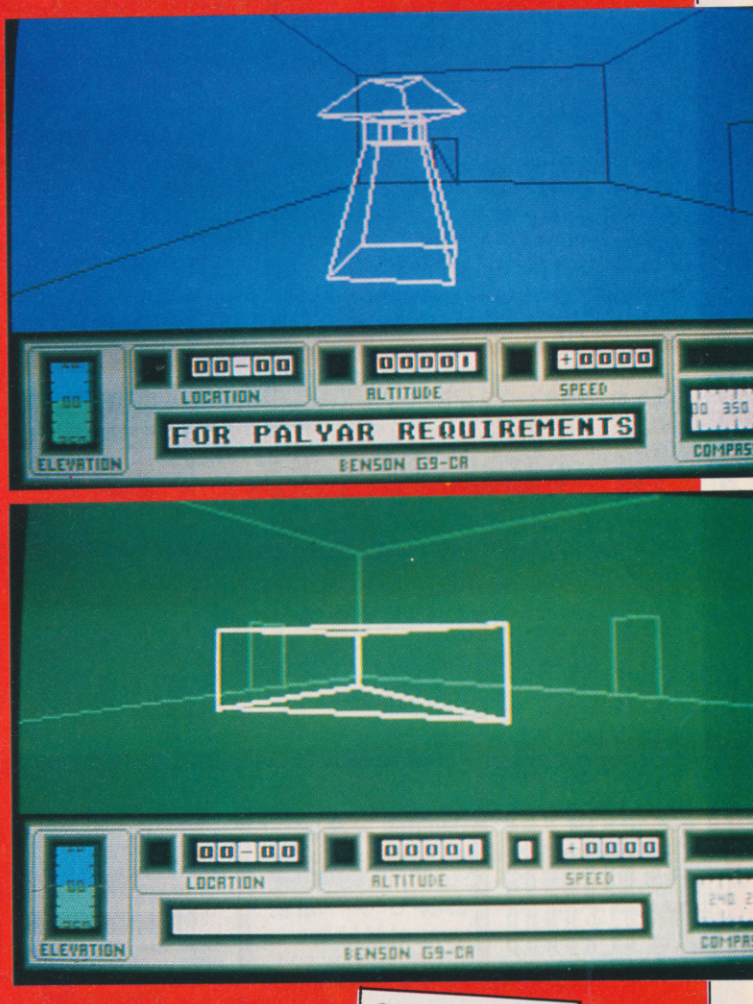
The layout and puzzles in the game are identical to those of the 64 version but the vector graphics have been speeded up immensely. Because of this they give a far more realistic feeling of movement and flight, uncannily close to the sensation given by banking and rolling in real flying. The few sound effects from the original have been reproduced almost identically and are not too impressive.

"It is far superior to the ridiculously feverish stories we got told by the software houses who try to excite with a bit of S.F. instead of a well created game"

The Amiga Mercenary is oddly convincing in giving the feeling of a genuinly outer space dimension, as if the monitor of the computer was really a window in the kind of universe which the plot of Mercenary describes. It is far superior to the ridiculously feverish stories we got told by the software houses who try to excite with a bit of S.F. instead of a well created game. The Amiga Mercenary is in another class altogether. It is certainly a game that needs a lot of time and patience if you are to get the most out of it. If you can't sit down with it for long periods, giving it a lot of thought, it is not going to please you. Afterburner it isn't. On the other hand, if all this exploration sounds like fun, you will find Mercenary easily the best, if not the only game of its kind. Highly recommended for well intelligent Amiga gameplayers.

T.H.

Price: £24.95



Graphics: 9
Sound: 5
Playability: 8
Value 9

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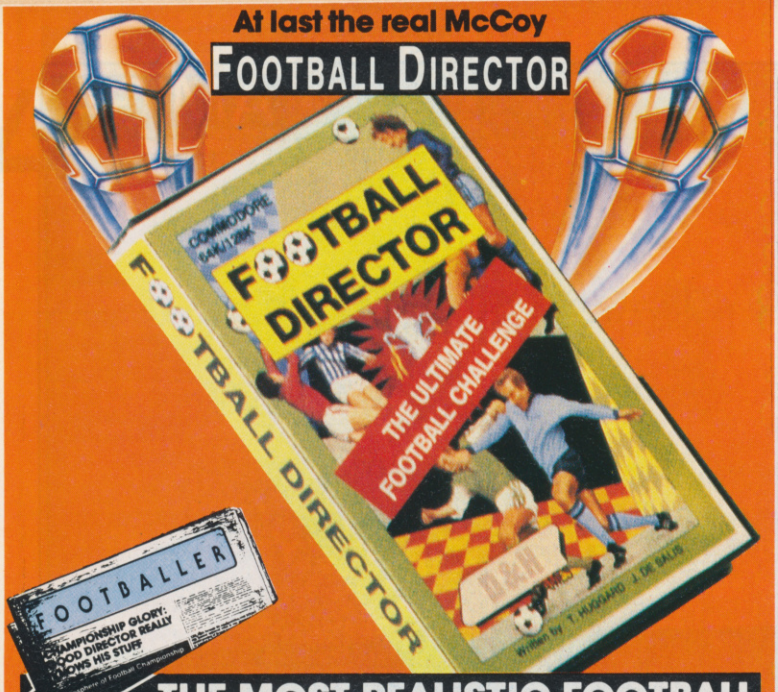

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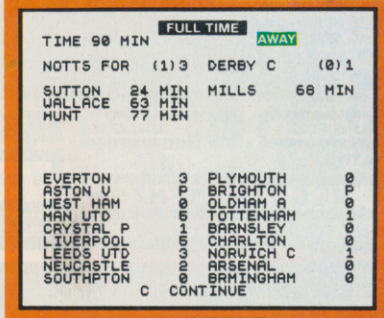

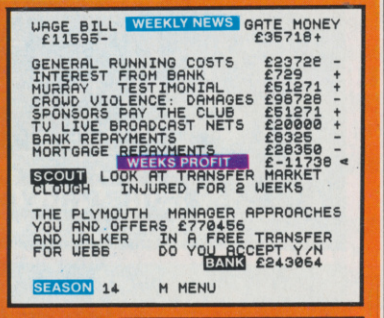

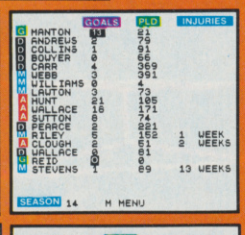

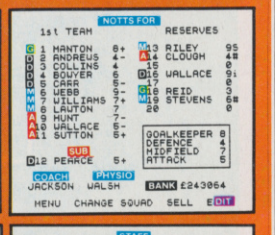

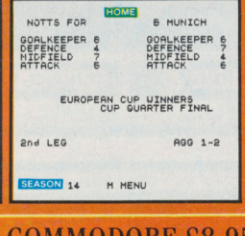

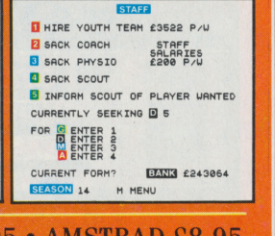

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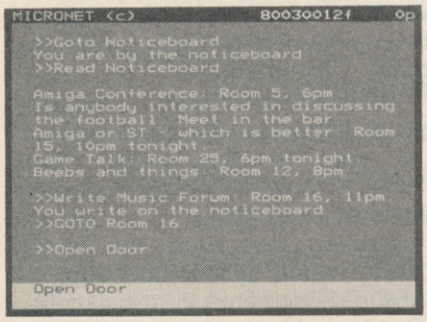
Feature

TELETALK

CCI looks at a new Teleconferencing service available to Micronet users

Picture the scene: you're in a room with three friends putting the world to rights over a cup of coffee. But there's a difference — your three friends are in Edinburgh, Cardiff and Exeter, and you are in London. How? Because you are using Micronet's new teleconferencing system — TeleTalk.

TeleTalk is like a conference hotel for Micronet users, with its own reception area, noticeboard, conference rooms and bar. You enter through the reception where you can pick up a room key to start your own conference, or look at the noticeboard to see what's going on and where. For more private matters, there is a memo facility which is in effect an electronic mail system. Even if the recipient is not on line it will be delivered the next time they enter TeleTalk, or type MEMO.



The service is very user-friendly, with logical commands for all functions. For example, getting from one place to another is a simple matter of entering instructions like GOTO ROOM 5. Once you are in a room with other people you can speak to everyone there by entering SAY followed by your message. If your thoughts are more private you can enter TELL or WHISPER followed by a user's name and a message, to speak to just that person.

The conference room is controlled by the KEYHOLDER who decides the subject to be discussed, who can enter, and even who can speak! If the door is closed, newcomers have to identify themselves and can only enter with the keyholder's permission. If the conference gets out of hand or you want to stop someone speaking you can EJECT the troublemakers! And if you want a meeting in total privacy you can keep the door closed and blinds drawn so that no-one outside even knows who is in conference.

Should you prefer a more informal discussion, or none of the conferences going on appeal to you, you can always go to Trader Vic's Bar. Here you can arrange a meeting or just exchange general chat.

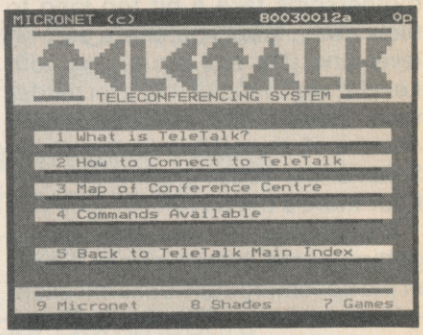
If you want to know who is on-line you can type WHO for a complete list of everyone in the conference centre, or WHERE followed by a person's name to find out where they are. You can have someone PAGED, either with a message, or just to let them know you're around — useful if the person is in a confidential conference where the blind is drawn. And if you don't want people paging you, you can preserve your privacy by typing PAGE OFF.

The system runs through a gateway on Micronet, on its own modified PDP11 computer. The screen is split into two windows, with the smaller one for your typed commands while the rest is a scrolling screen where the conference takes place in real time.

SOME TELETALK COMMANDS

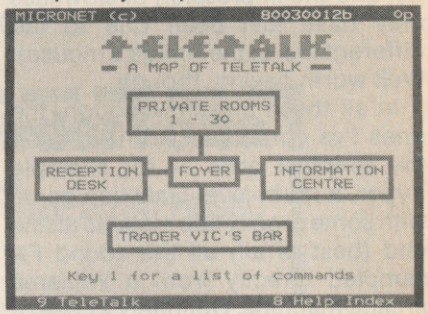
ADMIT (user)	Admits use into a conference room.
CLOSE BLIND	Draws blind of a room — so other users can't see occupants.
CLOSE DOOR	Closes door. Other users cannot enter without permission.
COLLECT KEY (number)	Collects a key from reception desk, allowing user to control that room.
EJECT (user)	Allows a keyholder to throw out an unwanted user.
GLANCE	Lists the users in a room.
GOTO (room)	Go directly to the room.
MUTE (user)	The keyholder can silence a user in the room.
OPEN BLIND	Opens the blind — allows people outside to see into the room.
PAGE (user) (message)	Pages a named user. A message is optional.
READ NOTICEBOARD	Displays the current notices in a room.
SAY (message)	Broadcasts a remark to all users in a room.
WHISPER (user) (message)	Send a private comment to one user.
WHO	Lists all the users in the conference centre.
WRITE (message)	Writes a message on the noticeboard which can be read by any user.

TeleTalk is aimed at Micronet's 25,000 home computer users, but a version of the teleconferencing system for business users is currently under development. This service (which will have a different name) is planned for launch on Telecom Gold later in 1988 and will make on-line business meetings a reality.



Telemap Group, Micronet's parent company, is also offering access to its teleconferencing facility through a new open access service — no subscription is necessary — called Hotel California (on 0898 10 0890). This means paying either 25p (off peak) or 38p (peak) per minute since the service operates just like the plethora of Dial-a-Dollybird lines now available. Hotel California also offers lots of other features such as the Casino (games), Teleshopping and an Agony Aunt.

TeleTalk, on the other hand, is a lot cheaper at just 3p a minute.



A Free Demonstration

If you have a 1200/75 modem with viewdata software, then you can log onto Micronet's free demonstration database. Simply dial 01-623 8855 and then enter the ID 4444444444 and the password 4444 to gain free access. Once on-line you can look up your own personal number. A year's subscription to Micronet costs £66.

Contact: Micronet, Telemap Group Ltd., Tel: 01-837 7872 or Durrant House, 8 Herbal Hill, London EC1R 5EJ.

Jeff Minter fights Insanity, gets addictively stung by a Vyper and chuffs off two years into the future on a PC Engine...

Greetings, humanoids. It's been a month for stocking up some new Amiga blasters. I've been Insanity Fight-ing and Xenon-ing away many an evening when I should have been working. Xenon's great, except that the motherships take a bit too long to blow away. Mind you, that's only on level one; I'm still struggling with Level 2, well difficult it is, a lot harder than Level One, and not much chance of my getting to the zarjas Salamander-esque graphix on Level Four more's the pity.

It's groovy to see the Amiga getting some decent games. Some of the upcoming stuff looks excellent — I saw a demo disk of a Defender game caled Stingray, which has some beautiful parallax-scrolling backgrounds and detailed aliens. Provided the programmer can get the feel of the gameplay correct I see no reason why this game shouldn't be better than the original. I saw the Amiga version of Star Wars, too: virtually identical to the ST version, better digitised sound, obviously, but perhaps a tad slower than the ST version through the towers (although I only had a brief go, and the impression of slowness may have just been due to the different feel of the Amiga's mouse). Well worth having, though.

In all these blasters, though, the ones I've come back to have been the simplest ones — for example Vyper, a multi-level Galaxian game with some groovy litle metallic aliens and (best of all) all the sound FX sampled directly from a Williams arcade machine. Definitely a case of 'pump up the volume, blast, blast'...

The good news: Revenge of the Mutant Camels is on the Amiga! The bad news: Yeah, but only on the Amiga running the '64 emulator... each wave of aliens lasts about 40 minutes, the sprites flicker all over the place and move about once every two seconds, and you really don't know what it does to my nice smooth scroll, it ain't pretty! However, the '64 emulator is a pretty remarkable piece of software: to completely simulate the hardware of the '64, sprites, SID and all, even to the extent of running '64 machine language unmodified, is quite a feat of programming.

Whatever happened to that ST emulator which was rumoured — and even advertised — last year? I certainly never saw one running... such an emulator ought to be possible on the Amiga, no custom chips to emulate, just TRAP calls and line-A stuff to redo...

So, games looking better on the Amiga — but is it all too late? I've speculated before about the possibility of a split in the market between the 'serious' computer user and the pure gamesplayer, caused by the introduction of dedicated games consoles. At the moment, such a divergence appears unlikely, in the light of the less-than-spectacular performance of the Sega and Nintendo game consoles in the UK market. Perhaps these machines didn't do as well as expected because, although more advanced than most 8-bit micros, the dedicated consoles didn't provide gameplay or graphics significantly better than a well-programmed '64. After all, the Nintendo console has been out for about 4 years in Japan — as long as the '64!

Now, though, there's a new system out in Japan: it's only been out for about six months, and from screenshots I've seen, looks like the current state of the art in game consoles. Designated the PC-Engine, the console measures only about 4in square and accepts ROM-cards. Screenshots of R-Type appear to be indistinguishable from the arcade version of the game. A friend of mine got his system from Japan about a week ago and he tells me that this little machine actually outperforms the Amiga... my own PC-Engine is on it's way over from Japan at the moment, I hope to give you my own impressions next month, when I've ha a chance to see for myself. Oh yes — the price of the console... around a hundred pounds. Could be interesting.

Mind you I can't see PC-Engine threatening Amiga (or ST!) games markets just yet. It'll probably be a couple of years before the system reaches these shores, if ever. And don't waste your money direct-ordering from Japan, 'coz to run the system you'll need a 110V power supply and an NTSC-standard TV, and unless you've got that sort of kit already, the total cost would be more than the price of an Amiga anyway.

Even so, if it were to come over to the UK next month it would be interesting to see how the likes of Amiga and ST fared. How many of you Amiga owners out there actually program the machine yourself — I bet a lot of you just whap in the latest game disk and barely ever see the Intuition desktop (and I know a lot of ST owners the same). Would you go for a system costing a hundred pounds which could outperform existing 16-bit micros? Would you rather pay twenty quid for a US Gold version of OutRun on disk, or twenty-five for R-Type — the real thing — on ROMcard?

Back to Commodore games: A game to look out for, coming shortly on both '64 and Amiga: Giana Sisters. So far all I've seen have been screenshots ('64) in a German magazine, but since the game's being coded by Rainbow Arts, the group responsible for the excellent Garrison, I have high hopes for the finished article. Giana Sisters is a version of the superb Nintendo game 'Super Mario Brothers'. For those of you unfamiliar with this gem, it's the single best game currently available on the Nintendo in the UK. It's a platform game, but don't let that put you off; I HATE platform games but I played this for three days SOLID when I first got m'Nintendo. I don't sprechen much Deutsch myself but from the little I can understand they seemed to like the game a lot. I look forward to its arrival on the Yakly Amiga.

Must go. I have a lot of difficult, important work to do; lots of really heavy programming and absolutely NOT skiving off for another round of Insanity Fight on the Amiga.

>> GET READY STARFIGHTER <<

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J.M.

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OKIMATE-20

The Amiga is capable of producing some of the most stunning graphics ever seen on a micro. However, unless you can transfer these images to a more permanent medium their use may be a little restricted. Alastair Statham takes a look at a budget COLOUR printer that will let you release your talents from the monitor.

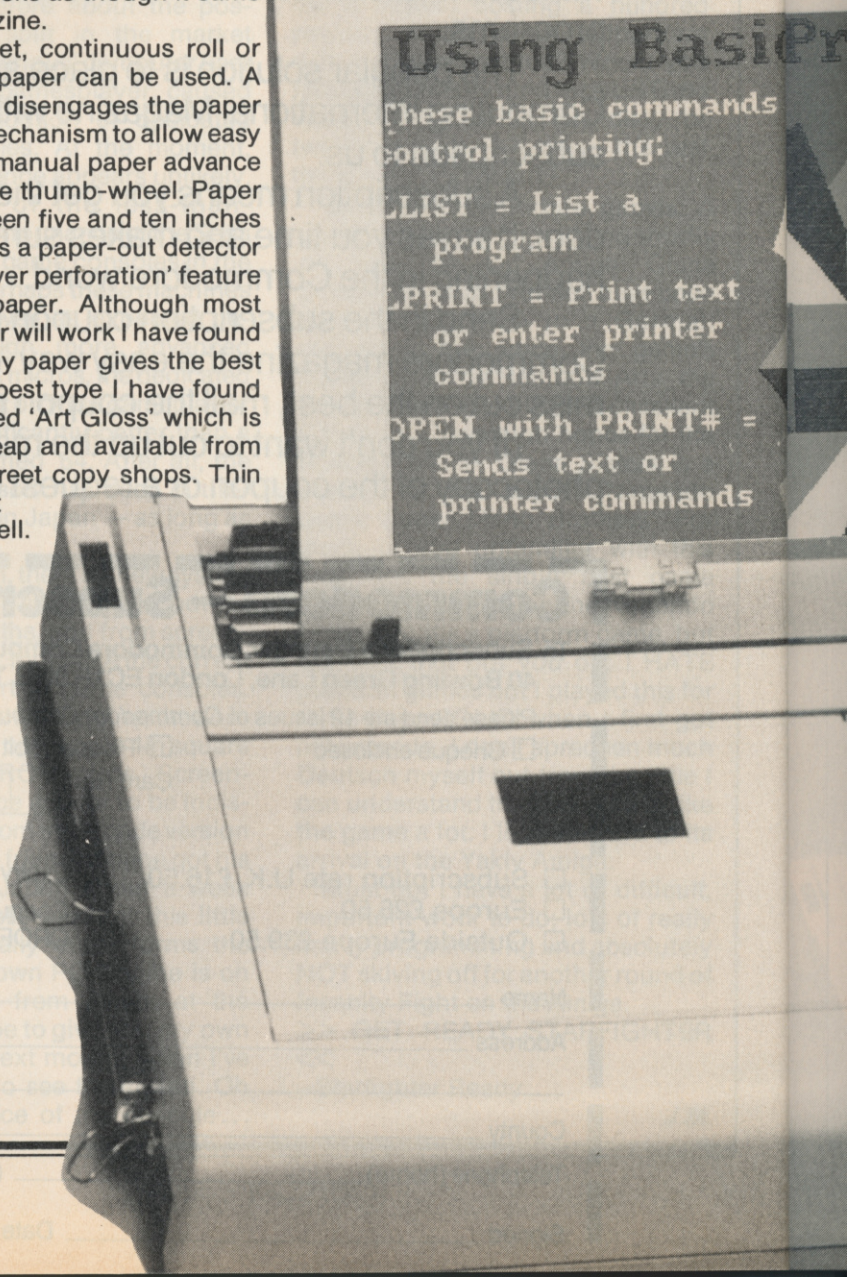
A printer is regarded by most computer users as a natural add-on to be acquired as seen as possible. The Amiga's colour capability would seem to make a black and white printer less than suitable. But the price of recent colour printers in the obstacle. The Okimate seems to have solved that problem.

The Okimate-20 is a thermal transfer printer. It works by melting a wax-like ink onto the paper. The ink is carried on a thin plastic ribbon housed in a convenient easy-load cassette. Ribbons are available in either colour or plain black. The life of a colour ribbon is about thirty-five thousand characters. It is made up of a series of eight and a half inch long red, blue and yellow sections separated by a black marker. It takes more than two feet of ribbon to print each line in three passes. The instruction book says that each ribbon is long enough to print ten screen shots but in practice I have been getting at least fifteen colour pictures from each cartridge. Black ribbons have a life of around a hundred and twenty thousand characters which should be enough for over seventy-five average A4 pages of text. A ribbon saving feature stops the black ribbon from advancing when multiple spaces are printed. If you are prepared to use thermal paper you can use the Okimate 20 without a ribbon at all but using a ribbon produces a bright and glossy image that looks as though it came from a magazine.

Single sheet, continuous roll or tractor feed paper can be used. A release lever disengages the paper advancing mechanism to allow easy loading and manual paper advance is via a simple thumb-wheel. Paper can be between five and ten inches wide. There is a paper-out detector and a 'skip over perforation' feature for fanfold paper. Although most types of paper will work I have found that thin shiny paper gives the best results. The best type I have found so far is called 'Art Gloss' which is relatively cheap and available from most high street copy shops. Thin acetate sheet also works well.

The twenty-four pin print-head is easily removed for cleaning or replacement as it simply snaps into position. The dot size produced by each pin varies according to the print speed selected and the setting of a slide switch called the darkness control. Correspondence quality is produced using fourteen by fourteen dot characters at a speed of forty characters per second. By dropping the horizontal resolution to seven dots a draft quality speed of eighty characters per second is possible. Normal graphics are printed at sixty characters per second compared to

From black and wh

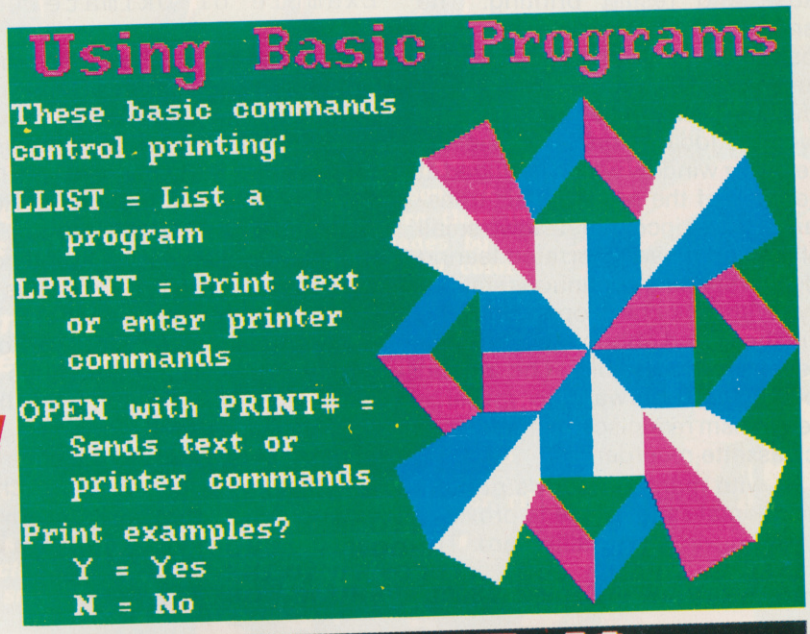


forty for full resolution twenty-four pin graphics. In this mode the resolution is 120 by 144 dots per inch.

Three basic character pitches are provided as standard. Pica prints at ten characters per inch (CPI) allowing eighty characters per line (CPL). Elite allows twelve CPI and ninety-six CPL while fine print gives just over seventeen CPI and a fits a full one hundred and thirty-two characters on a single line. Each of these styles is also available in a double width mode. Italics and underlining may be used to highlight text. Bold text is printed in correspondence quality and is therefore printed no differently from the normal text in this mode. Superscript and subscript modes allow accurate printing of items such as chemical or mathematical formulae. Although the sub and superscript characters are quite tiny they are always perfectly readable.

The Okimate-20 is a very neat little printer. It is less than two and a half inches high and has a footprint only just larger than a sheet of A4 paper. The controls are well laid out and easy to use. The printer is mains powered with no external transformer. A green rectangular LED on the top panel of the printer lights

continued on page 58



CONTINUED FROM PREVIOUS PAGE

when the power is on. This LED also doubles as a warning light by flashing when an out of paper or end of ribbon condition occurs or when pause mode is selected. An adjacent select button allows the user to pause and restart printing. The darkness control comprises a five position slider switch and is on the same control panel. The paper advance thumb-wheel and release lever are located on either side of the paper window which is hinged at the back of the printer. This transparent cover incorporates two small rollers and a partly serrated tearing edge for splitting continuous stationery. With this cover open both the print head and ribbon compartment are easily accessible. The ribbon cover hinges forward to reveal a mechanism reminiscent of a domestic cassette recorder.

As with many of today's printers the Okimate's interface is provided by a plug-in personality card. The

duces are nearly glossy
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kable value for money.

Example of Okimate text

Amiga model has an 8K printer buffer and comes with a Centronics interface. The card used to provide this interface on my model was in fact designed for use with an IBM PC but has had the driver ROM replaced by an AMIGA version. The manual supplied was really intended for use with the IBM PC but this did not detract from its usefulness. The manual is about A5 size with over ninety pages. The instructions are clear and easy to follow with a number of helpful diagrams. The topics covered include the controls, specifications, special control characters and information about advanced programming for graphics and custom character sets. A full description of the cable requirements is given together with details of a group of switches on the personality card. These switches control such settings as the default print quality, form length, line feed and character pitch. My version also came with an additional A4 sheet of instructions describing the Amiga parallel port pin-out and other details specific to the Amiga.

"A one or two dot overlap is not nearly as noticeable and prevents any white gaps being left."

The main difference between the IBM and AMIGA versions of the ROM is in the control code commands and line-feed movement. With the Amiga version DIP switch five on the interface card sets the line-feed to either 23/144 or 24/144 of an inch. This control enables the user to minimize any gaps left between the lines when printing graphics. The only weak point of this printer seems to by the accuracy of its form-feed. It is probably no worse than most other printers in its price range but with large blocks of glossy colour a thin white space left between lines is more noticeable. The solution is to arrange the line-feed so that the lines slightly overlap. A one or two dot overlap is not nearly as noticeable and prevents any white gaps being left. In the Okimate-20 driver supplied with Workbench 1.2 the graphics form-feed is controlled by two instances of the control command "1B3324". I used the public domain Filezap utility to change each of these commands to read "1B3322" and thus reduced the line-feed to 34/216 of an inch compared to the original 36/216. This has completely cured the problem.

I am extremely pleased with my Okimate-20. The colour pictures it produces are almost glossy magazine quality. Even in monochrome its graphics are superb and the quality of the text puts my typewriter to shame. It is primarily a colour graphics printer and as such does not represent as good value if all you need is a monochrome text printer. Despite the price of ribbons and the easily remedied form-feed problem, I believe this printer represents remarkable value for money.

HOW OKIMATE 20'' PRINTS COLORS

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OKIMATE COLOR FORMAT (LPRINT):
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  MAGENTA DATA + RETURN/NO LINE FEED (141), CYAN DATA + RETURN (13)
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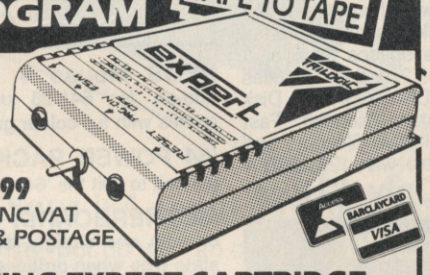

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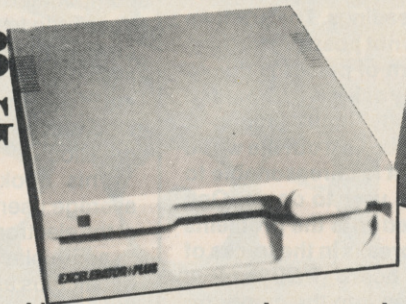

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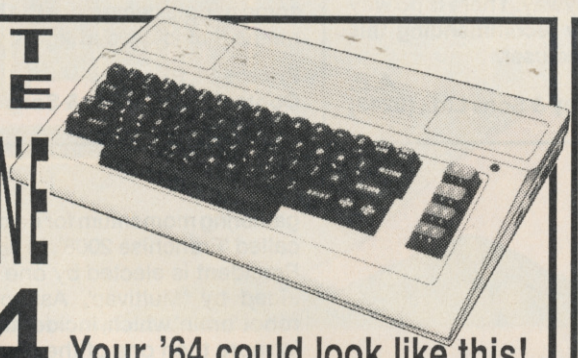

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Troubleshooting & Repairing Your Commodore 64

When the day comes that you switch on your C64 and nothing happens, what do you do? . . . Well check the silly things like is it plugged in etc but if that is all o.k. then what? Most people would pack it up and take it to the nearest repair shop. What this book suggests is that you could perform many repairs yourself! This is a very bold statement and one that does assume an lot on the part of the user. Armed with your trusty DVM and logic probe and the book (of course!) all will be well in a few minutes.

The book covers just about all of the innards of the C64 to great depth and the engineer of technician will find it a useful reference guide to the operation of the C64. Unfortunately the average user will find that it is almost impossible to follow and will be of very limited use. Only if you are interested in electronics as a hobby will you find this book any help. The basic problem with the book is that the layout is so messy that finding your way around it is a nightmare. There is no attempt at a logical fault finding guide in an easy to read chart format. Over the years there has been developed standard fault finding systems that have proven to work well. Of course every system can be modified to suit the type of equipment in, use the computer is no exception to this, but I can't find any attempt to give a standard guide in this book.

The main method that has been used is to take the readings of a working C64 in terms of pulses from the pins of the chips and voltage readings. The problem with this is that it is not possible to know if a changed pattern of pulses is due to the chip being faulty or it it is responding correctly to a faulty input signal. A technician could soon sort out the wood from the trees, but it is unreasonable to expect the average user to do so. One thing that is laboured on is the problems due to shorts and breaks in the tracks of the printed circuit board (PCB) unless something has fallen into the computer shorts are very unlikely, but I do agree with the statement about breaks, this is possible due to the pounding that the keyboard gets this can lead to fractures, but I have NEVER come across such a case on a C64 (some BBC micros were prone to broken tracks about their keyboard due to the keys not being installed properly so broken tracks can happen).

To conclude this book gives a great deal of information that could be of some use, but the only people who would be able to make SAFE use of it would be technicians who would probably not need it anyway. There is no way that I could justify recommending this book to the average user.

Price: £13.65 ***A.E.***

Contact: John Wiley & Sons Ltd., (0243) 779777

Interfacing your Microcomputer to Virtually Anything

This is a long title for a very heavy book, computers need to communicate with the outside world i.e. disk drives, VDU's and even YOU the user! This can be a complicated business and this book does little to dispel that view. It consists of 17 high powered chapters with titles like: It's an Analog World; Electrodes and Transducers; Linear IC Basics; and Operational Amplifiers: The Basic Building Block.

This book is not intended for the average user, but it is aimed very much at the electronic hobbyist and technician. In some places it delves into the realms of calculus and anyone might find this a little intimidating at times. This book would make a good third year course book for an electronics student with some aspects reaching fourth year levels. A lot of work has been put into the book, with plenty of diagrams and graphs to illustrate each point. The projects are well explained and should present no real problems apart from the ever present difficulty of finding suitable equivalent components for the American listed part numbers.

This book is very well produced and would be a good addition to the library of any electronic hobbyist or technician. The only criticism is that it will put off some people because of the high level of maths that is used at times.

A.E.

Price: £11.10

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Robot Dreams

by
Isaac Asimov
(Victor Gollancz Ltd., Hardback £10.95/Paperback £3.95)

Isaac Asimov first began writing 'robot' stories in 1939, when he was nineteen years old. Then, of course, there were no 'robots' as we now know them but that didn't stop the young Asimov from describing not only how they looked but also how they acted. He actually invented the 'Three Laws of Robotics', the first of which, as any SF buff knows, is 'A robot may not injure a human being, or, through inaction, allow a human being to come to harm'. (If you want to know what the other two are, then read the title story in this book).

'Robot Dreams', (Victor Gollancz Ltd., £10.95 Hardback/£3.95 Paperback), is a selection of Asimov's 'robot' tales and they go to prove what a prophetic writer he is, for some of the stories anticipate events in robotics that only a writer of genius could have forseen.

Of course, robots come in all shapes, sizes and forms and in this anthology there are examples of all of them. From those who are just menial servants to those who turn out to be far cleverer than the scientists who invent them.

In 'Robot Dreams' you will find stories of computers, (naturally), a couple of murders — one done by a dear old lady aided by her maladjusted robot called 'Max' (no relation, we believe to CCI's famous Marketing Manager!) — and an extremely topical story, given that the American Presidential election fever is gathering momentum for next November, called 'Franchise 2008', in which the US President is elected by one man alone, aided by 'Multivac', Asimov's famous robot 'brain' which, incidentally, appears in more than one of the stories. (Come to think of it, maybe Asimov has a point. One man and his computer could scarcely do worse than the millions of American voters last time around!)

This latest Asimov book is different, in one way, from most of his others. It is illustrated and not just by an old illustrator, either. Ralph McQuarrie, the artist, was involved in those blockbuster movies 'Star Wars' and 'The Empire Strikes Back' and in 1986 won an 'Oscar' for his special effects in the film 'Cocoon'.

If the true worth of a storyteller can be gauged by the variety of the work he produces then this collection can only confirm Asimov's position as one of the finest, if not THE finest, SF writers of our time. You may have read some of these stories before but without exception, they are worth reading again.

D.M.

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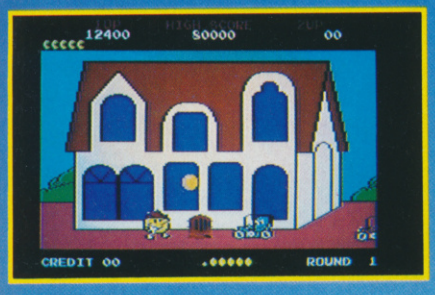

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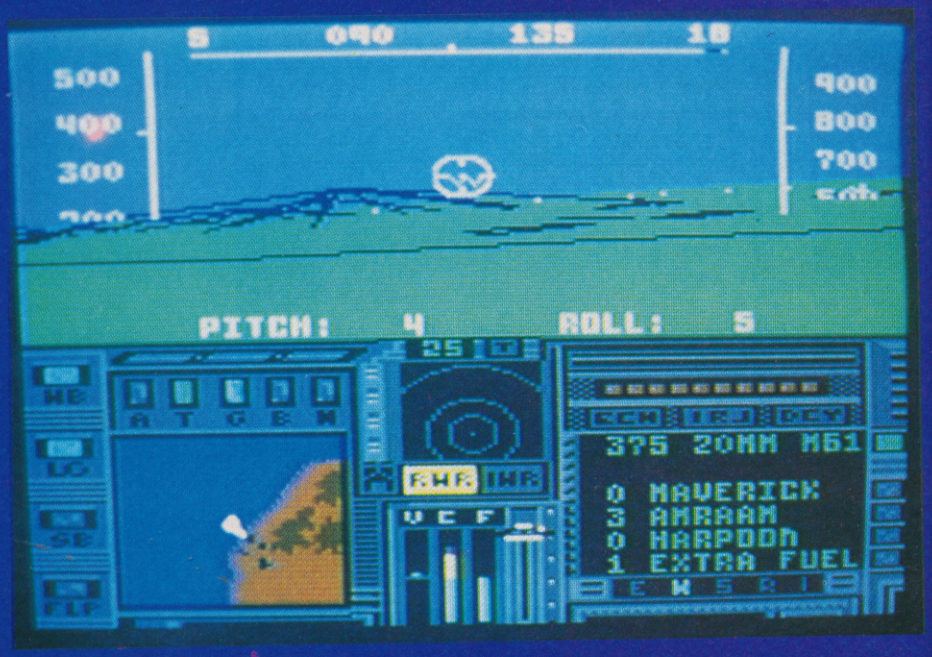
Project Stealth Fighter is the first Microprose warplane simulation since 1984 (the later release of some titles in the UK makes it seem less). Having helped tens of thousands of desktop aviators to win their wings with Solo Flight, Mig Alley Ace and F-15 Strike Eagle, MicroProse president Bill Stealey (himself a former distinguished Top Gun) and programmers Jim Sunoske, Chip Hill, Gregg Tavares and others have now applied their expertise to the challenge of interpreting the abilities and characteristics of the hugely secret Lockheed F-19, built for solo strike missions. Capable of being 'radar invisible', it is designed to fly alone into the heart of enemy defences to destroy, disable or simply photograph "- and steal away again with not so much as a squashed fly marring the beauty of its jet black livery.



Goodness knows how long it takes even the most competent USAF proteges to come to grips with this 21st century avenger, but certainly MicroProse know how to get your education off the ground. The game comes with a quickstart primer, and indispensable keyboard overlay, and a 120-page book that alone tips the scales at just over 500g (that's 1lb to those of us who grew up with imperial measures if not Imperial Airlines).

The game's hunger for RAM hints at its sophistication, with the (double-sided) disk staying in the drive during play so that additional chunks of program (particularly those carrying different scenarios) can be accessed. Project Stealth Fighter is the first to use a new MicroProse routine that accelerates disk loading by as much as five times - but a point to watch is that it may be incompatible with non-Commodore drives and will almost certainly conflict with any cartridge -based fast loaders.

Loading from scratch calls up an atmospheric loading screen and then a series of nicely graphic option sheets. At first you'll get more than enough action making a training flight to Libya (warmer relations means that in today's wargames, Russia is apparently seen as nothing more than an avuncular province of Finland), choosing from airborne, tactical or strategic targets. You might find yourself bombing the Gulf of Sirte, battling it out in the skies over Benghazi, or dodging SAMs over Tripoli.

Training status makes you almost impervious to the dangers you'll eventually face in real encounters. And even in missions proper you have a chance to improve in stages by carefully selecting the quality of your opponents (greens have no tactical skill or sophistication, veterans are likely to fly through your parachute) and of your own flight performance. A no-crash option, for example, allows you to practise takeoffs, landings and aerobatics

FIGHTER

AMERICA'S NEWEST TOP SECRET AIRCRAFT

without coming to grief; another minimises the damage done by enemy strikes.

After running your eye over further mission and intelligence briefing screens (more sophisticated sorties require you to note the names and coordinates of your targets), you're ready to cram your four weapons bays with an assortment of nasties appropriate for the mission ahead, guided by the detailed weapons data given in the Operations Manual. Now the fun can really start, as you settle back in the cockpit of your F-19 and check out the head up display, or HUD, as the sweet whine of the twin turbofans (superb sound effects are to be heard throughout, by the way) serenades this lethal liquorice haddock off the runway and into the blue yonder to ceiling at 36,000 ft and cruise at something in excess of Mach 1.

Our shot of that cockpit view does scant justice to the detail and realism of the screen scene this game unrolls before you; the colourful and enticing array of instrumentation below your eyeline, the 'holographic' readouts and target sights that appear to float beyond the canopy, and the ever-changing seascape or terrain and three-dimensional targets that are your particular meat.

Project Stealth Fighter excels over all previous MicroProse offerings (the innovative Guunship included) in the 'realness' of the simulation it offers. You need only whisper to the joystick and your fighter will swoop and dive like supersonic swallow, the horizon smoothly slipping past at an alarming speed and angle until you correct your pitch and roll, keeping one eye on the lower cockpit display for warning lights that signal an enemy threat in range. When that happens, you can start playing dirty and switch in the defensive systems to block radar, jam their radio communications and, best of all, unleash sneaky little decoys that will have enemy SAMs chasing their tails long after you've emptied your bomb bays and turned for home.

"Truthfully, it is hard to convey on paper the hugely tactile appeal of Project Stealth Fighter and the advance it represents over all and any flight simulators that have gone before."

It is the sheer variety of combat situations available, combined with the challenge and novelty of flying such an unusual craft, that give Project Stealth Fighter such all-round appeal. At the simplest levels, you can throw yourself into a high-tech dog fight or coolly execute a devastating bombing run; but as your flying hours increase (and you can Save a career, including your current rank, to disk at any point, rather than start from scratch), you'll be able to make full use of the equipment and tactical ploys at your disposal - all of which the Operations Manual explains and illustrates in exemplary fashion. Not that you'll emerge from the debriefing smelling of roses every time - but if you must bail out, doing so over the sea not only gives you a better chance of being rescued by a friend, not foe, but also obligingly sends your F-19 to the seabed with all her secrets kept safe.

Truthfully, it is hard to convey on paper the hugely tactile appeal of Project Stealth Fighter and the advance it represents over all and any flight simulators that have gone before. It looks great and plays superbly - and the game also embodies some sly humour (not least the endscreens that graphically reflect your abilities, or lack of them), bringing a welcome light touch to what might otherwise be an overbearingly aggresive content. It is difficult to know how MicroProse are going to follow this act - though there's a hint of new scenario disks being released that will propel you into ever more realistic and entertaining missions.

£19.95 disk only *J.R.*

Graphics: 90%
Sound: 80%
Playability: 85%
Rating: AWESOME

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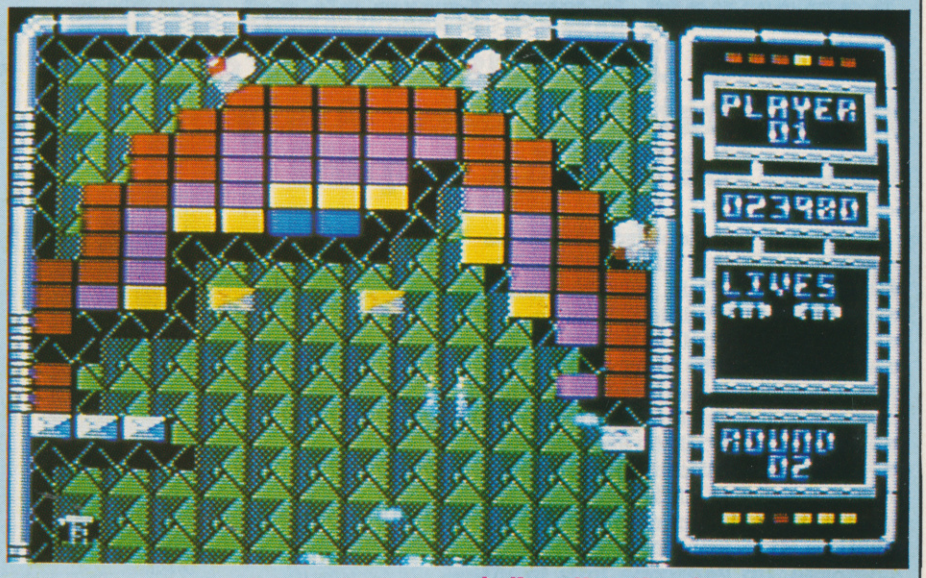
CRISP

Imagine

Arkanoid II "Revenge of Doh"

"Unlike Arkanoid, you can collect more than one capsule at a time, which leads to some frantic moments."



Arkanoid was the game that started the Breakout revival. Its sequal, Arkanoid II is one of two we have this month. You all know the score, and I am sure you do not need an explanation of the game's basis. No! You must assume they don't and give a (good humoured) explanation.

The main advantage Arkanoid had over its rivals was the option for paddle or mouse control. With a paddle or mouse, the bat can be moved at the speed you want, giving accuracy over small distances and speed for longer movements. Arkanoid II has no paddles option, but can be controlled by a Commodore or Neos mouse, as well as joystick or keyboard. Most of the other alterations are minor, but improve the gameplay.

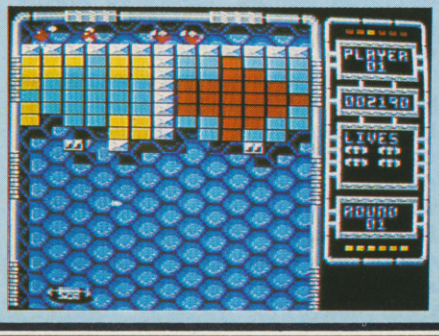
At first sight, it looks less impressive than the original. Neither sprites nor backgrounds are as sharp as before. All the jingles and sound effects have been remixed, but the music has taken a dive and is now a very run of the mill, rather tuneless piece.

Once you have chosen your control method and number of players (1 to 4), the brick bashing can get underway. I was pleased to see that bonus capsules rain down the screen far more frequently than before. Not only that, but there are some new additions, such as the "R" that reduces your bat size, the "T" that gives the bat a ghost trailing behind, the "M" that lets the ball break right through the bricks, the "N" that regenerates lost balls, and a glowing blob that gives your bat one of a few special powers. One of these powers splits the ball into swarms of smaller balls. Unlike Arkanoid, you can collect more than one capsule at a time, which leads to some frantic moments.

Arkanoid II is an enjoyable game, but we just do not need any more of these games. Leading software houses such as Ocean might be better investing their undoubtedly oustanding creativity and resources in developing original games, not simply releasing clones of clones. What is the attraction for so many software companies who are now producing 'Breakouts'? It is like an epidemic that is stagnating the industry. Ocean seem to have the right idea, taking a lot of time over Platoon for instance, so let's hope this is the last of the bounce 'em ups.

I would recommend Arkanoid II to any 64 gamer who does not already have such a game; it is certainly excellent but there must be few who do not already possess a Breakout clone. Its one of the best of its kind, but just too old hat to gain a big audience.

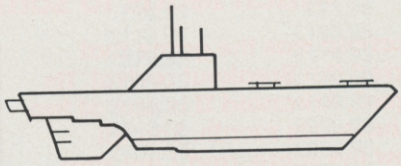
T.H.



Graphics 71%
Sound: 82%
Playability: 58%
Overall: 60%
Rating: *Crisp*
Price: £8.95 (cass)
£12.95 (disk)

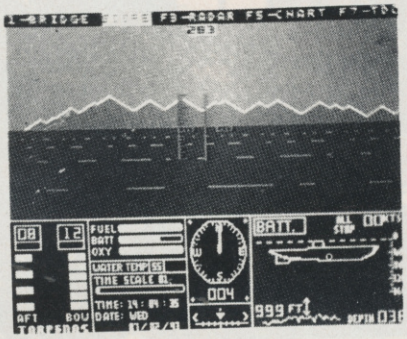
UP PERISCOPE

Actionsoft have launched in the UK and Up Periscope is one of their first releases, Andy Moss takes the sub for a spin.



At first glance, you may be forgiven for thinking that "Up Periscope" is to submarines what "Flight Simulator II" is to airplanes. After all Sub Logic are credited for the 3D graphics and the special effects, there are two thick manuals to wade through and maps aplenty to study. Unfortunately that is where the similarity ends. Where Flight Simulator II is the tops for realism, cockpit accuracy and almost rivet for rivet emulation of a Piper Cherokee, Up Periscope fails in all departments successfully to emulate a serious sub simulation.

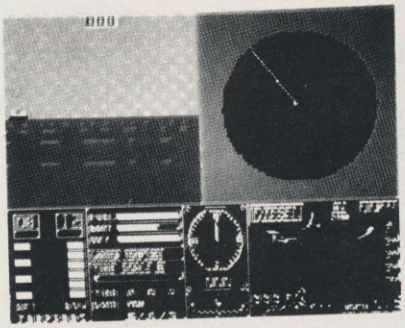
Let's consider for a moment the competition. Microprose' SILENT SERVICE for one. Spectacular graphics made it realistic for a start, some very tasty sound effects enhanced the atmosphere, and a nice blend of arcade action and complex strategy situations has made the product fun to play. HUNT FOR RED OCTOBER is another example of an excellent sub program but built around a present day scenario rather than an historical one. These examples prove that entertaining yet strategically taxing programs have already been a success and anyone thinking of bringing out anything similar should at least try and give these games a run for their money. UP PERISCOPE has fourteen historical situations built in, and a number of other scenarios that are designed to test your skill at say day or night time missions, using either Periscope or surface attack modes. There are various display screens including sonar, zoomable maps, a torpedo data computer, and a mix of gold and new style torpedos.



Where the program falls down is that the main screen display (the view from the bridge or Periscope) is poorly depicted with some white lines moving in various directions to indicate the wave movements. Where Actionsoft can claim "truly unprecedented 3D detail" is beyond me, so is their claim that "Nothing else can compare".

The map screen is very poor, with a small black hyphen to depict your sub, and some various shaped blocks to depict the enemy convoys. These perculiar looking objects which sometimes change angles (to portray the zig zag strategy of some ships) present very little difficulty to sink. The sound leaves a lot to be desired, although all the necessary noises are present, allbeit either just about audible or too loud.

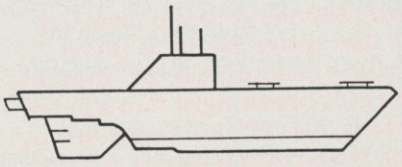
To begin with you get a feel of the program by choosing practice at New London Conetticut, this scenario enables you to become familiar with all the controls and weapons systems, whilst letting you learn about evasive tactics and attack moves. When you are adept at all of this, you can then select either an historical situation, or just dive straight into a war patrol at Mare Island or Pearl Harbour in the Pacific Theatre. I preferred the all out attack war situation rather than reliving the old battles as playing with a sense of "what happens next?" is more stimulating. One good thing built into the program is a "speed up" feature which takes away some of the more tedious aspects of Patrolling the Pacific given that you have hundreds of miles to cover.



The whole package in my mind cannot be aimed at the serios simulation strategist as it has been designed in too simple a format, sacrificing gameplay for user friendliness. It is a shame that what promised to be an exciting new release has turned out like some of its torpedoes — a damp squib.

A.M.

Price: £19.95



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BLOOD VALLEY

Gremlin

In a slight change from their usual style of arcade-style games, Gremlin have now finished their computer version of the role-playing fantasy books Blood Valley. The books are a bit different in that they allow two people to take part in the same adventure, moving around independantly using separate books to determine their fates.

Gad Valley is the setting for the game. Times are hard in the valley; Firedrake, the land's ruler has enslaved the population, condemming them to a life of misery. Each year the Firedrake holds a hunt. This is no fox hunt though, because one of the slaves is chosen for his or her outstanding strength, intelligence or cunning so as to make the hunt a real challenge. If the slave is caught he will be slaughtered, but if he manages to escape from the valley he will be freed forever. Three hunters are out to get the slave, each patrolling the areas they know best.

On loading the 64 version, you first get the option for one or two players. If two players are competing, player one takes the part of the hunter, and places his three warriors around the land where he hopes the slave will run into them. Player two can then choose whether to play a barbarian, priest or thief. This choice affects the slave's qualities and objectives.

With that out of the way the main game can load. A horizontally split screen shows the views for each player. Travelling around the land is done by running left or right over very jerky scrolling backgrounds. Small baddies continually attack the equally small players. These can be killed with a couple of jabs from your sword. Now and again you will come to a junction and can choose which path to follow. Using objects dropped by dead enemies you can pass the obstacles that lie in your way. If the players meet, a very simple and rather unsatisfying fight decides the winner.

Unfortunately, the atmosphere and sense of adventure that comes across in the books is hardly to be seen in its computer format. Wobbling across the somewhat monotonous backgrounds with an unexciting soundtrack in the background failed to entertain. So finding it difficult to exploit either of these elments which is a pity because this is undoubtedly an excellent tie-in with the popular Blood Valley series. An extensive background scenario is included with the game, promising a rich adventure, but the game seems to fail to live up to this. If you have played and enjoyed Blood Valley in book form, you should conform to take a look at the 64 version, but as always get a demonstration before shelling out.

T.H.

Graphics: 33%
Sound: 48%
Playability: 45%
Overall: 46%
Rating: IFFY
Price: £9.99 (cass)
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Screenshots from Amstrad version.

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"FROM OUT OF THIS WORLD...

Screenshots from CBM64/128 version.

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GREMLIN

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ECO

Have you ever wished you were different? Most people at one time or another must have envied a dozing cat before leaving for a day at school or the office, or maybe the apparent careless freedom of a bird appeals to you. How does the rapacious solitude of being a spider grab you? Thanks to Ocean and Denton Designs, you can become the species of your choice.

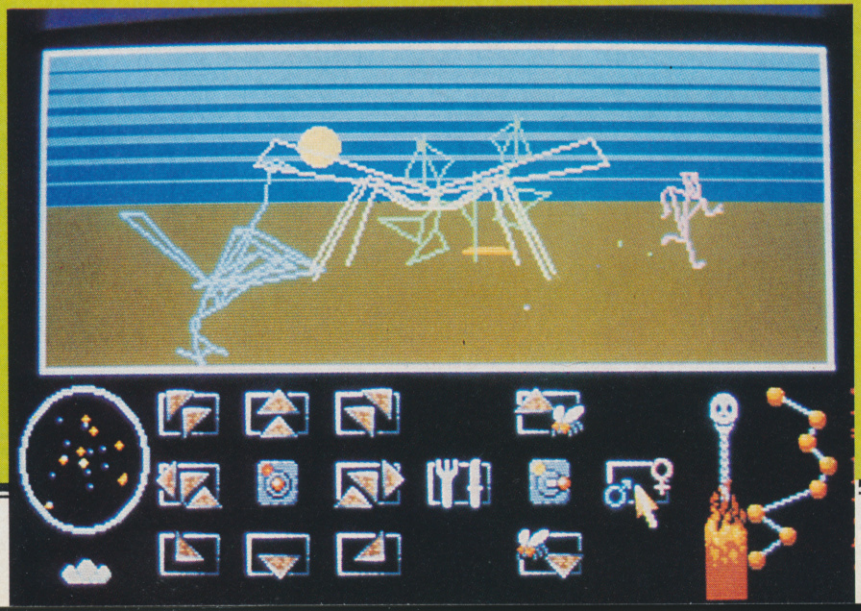
But like life itself it is not going to be easy; (whoever promised life would be?) To become your chosen creature, you cannot just pick it from a list any more than you could when you were born. No, instead you have to take the correct path through evolution, living to mate and producing more advanced offspring. The world in which your battle to survive and evolve is set can have one of a few climates that determine the environment. Next the computer creates all the lifeforms inhabiting the world. When the designers came up with the idea, they must have wondered where to start. It would not have been much fun having to evolve from a single-cell blob through all those fishy animals just to get to a land-based creature, so the game begins with you as either a spider or a fly, the computer decides which.

Your world is viewed from behind your animal in 3D vector graphics. Initially, you will be content to wander around watching everyone else going about their business. Other insects scurry, quadrupeds gallop, birds fly and men run in very realistic motion.

When you have had enough of sightseeing, your first concern is to find food. This will be in the shape of rapidly growing and dying small plants. Eat some food and you develop to maturity, and have to find a mate before dying of old age. Find a mate and you get a chance to give birth to something that is a little closer to your target animal.

Eight genes are linked together at

varying points as in the read double helix of DNA, and one new gene can be altered with every generation. Some alterations will make little or no visible change, perhaps a slightly larger body or longer neck. In contrast, some will dramatically change your form, maybe from a fly to a bird, or spider to a dog in one step. We made one



"Some alterations will dramatically change your form, maybe from a fly to a bird, or spider to a dog in one step."

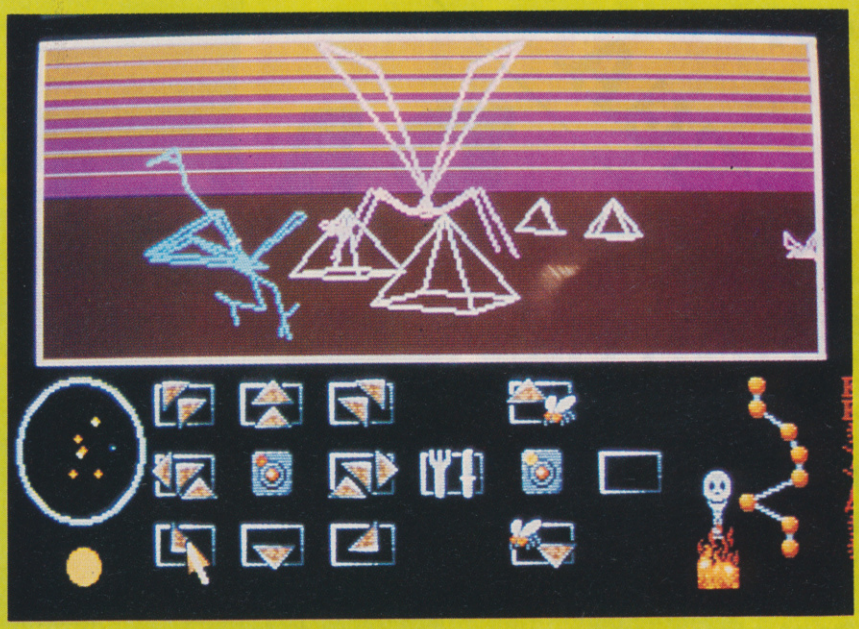
genetic mistake and were reborn as a plant instead of a spider — and, of course, got eaten!

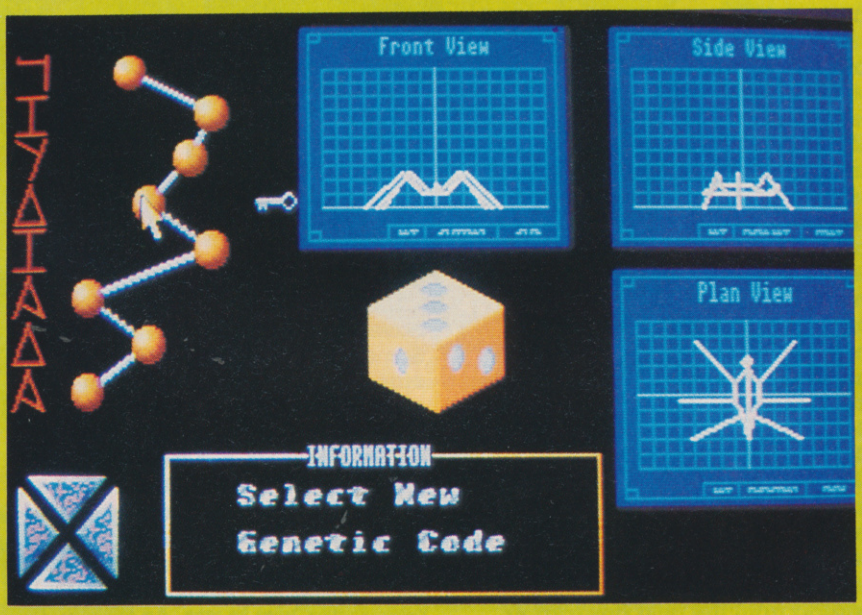
Once you have mated you take control of your baby, who must go in search of food and mate as before, but this time, if you are big enough, you will move on from plants to inferior creatures for your lunch, and so it continues.

No game from Denton Designs would be complete without icons, and Eco uses these for movement and gene manipulation, although a joystick can be used for walking around. The vectors of the scenery and animals have some impressive frames of animation, but would benefit from a few more inbetween. I had hoped for a little more speed coming from a 16-bit machine. The concept of Eco is bulging with potential, a lot of which has been captured. However, with half a mega-byte to play with, more variety and logical graduation of the creatures could perhaps have been included. Species between the existing ones would have given the game more depth.

The expectations I had of gradually changing size and stance, or developing wings are not entirely present in Eco, as there are really only insects, birds, quadrupeds and men into which to evolve. Apart from this probably over-optimistic personal wish for a greater level of depth, Eco is very hard to fault. Its concept is much more original than I thought possible at this stage in computer games, and so Eco is outstandingly interesting to play. The graphics are highly effective, the music and sound effects enhance the mysterious atmosphere considerably, which it all adds up to a really great game. If you have an Amiga, you have got to buy this game because if is an absolute classic. If you haven't got an Amiga go and buy one just for Eco. It shows just what can be done when the really bright minds that we know are at work in computer entertainment are given the room to use their creativity to the full. Ocean have to be congratulated for making their first release on the Amiga a brilliant success.

T.H.





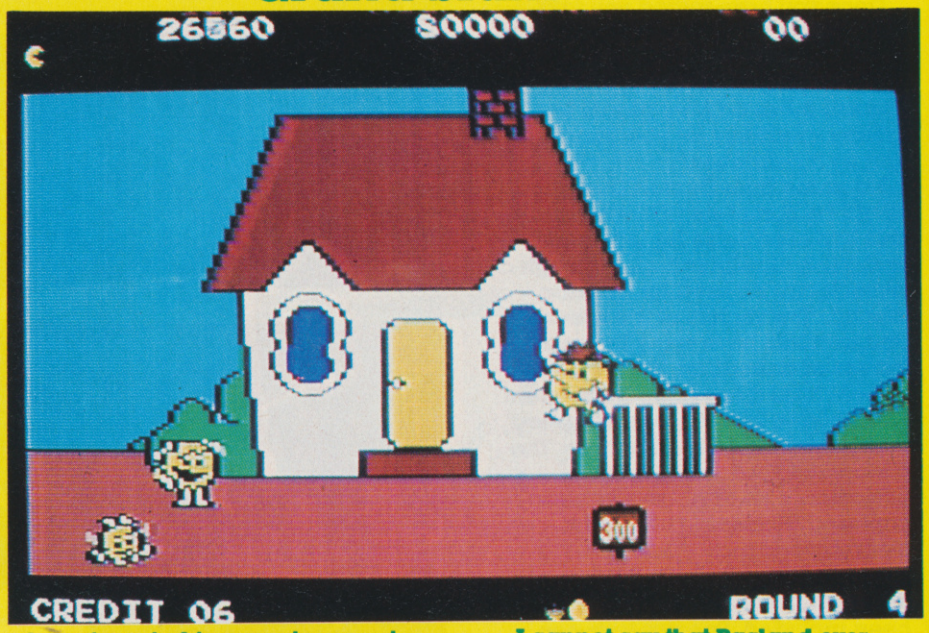
Graphics: 89%
Sound: 80%
Playability: 95%
Value: 86%
Rating: Awesome
Price £24.95

C64

MEGA

PACLAND

Grand Slam



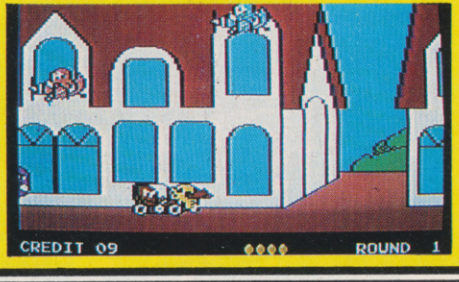
Converting all the latest super de-luxe coin-ops to 8-bit home computers is undoubtedly very healthy for software houses' bank balances, but can these conversions of state of the art arcade games hope to come really close to the originals? It is certainly very difficult to see how such a downward jump could retain the full hi-tech quality. However, conversions of the longer established machines may not instantly rake in as much cash, that they probably have a far better chance of turning out to be enjoyable games in themselves for they are less likely to make virtually impossible demands on programmers in the 8-bit environment. Soon after the third Pac coin-op Pacmania appeared, Grand Slam have come up with the 64 version of Pacland, and earlier edition of the same story.

I am not exactly sure of the storyline behind the game, but it involves fairies, magic boots, and soft flower beds. Make up your own plot along those lines and continue reading from the next paragraph.

All the familiar characters from Pacman are there: Pac, the ghosts Inky, Pinky, Blinky and that other one that doesn't rhyme, with a few new ones thrown in. The dots and maze have made way for a new view and style of game. Starting in the town, each landscape scrolls horizontally. Since his first adventure, Pac has sprouted short arms and legs and mastered the art of facial expression; no longer is he the constantly gobbling featureless ball that conquered the electronic entertainment universe.

Whatever the story behind it, the idea of the game is to make it to the end of each land, hop through a magic door where you will meet a big fairy, and return home to the delight of Mrs and baby Pac. The ghosts, not content with chasing you on foot (do ghosts have feet?) have invested in some transport. Some try to run you over in cars, others drop baby spooks from aeroplanes and windows. I remember Pac being able to jump on the car roofs, but the 64 version interprets this as a collision, so you lose a life. The way to dodge these is to use the two speeds available. Tapping the joystick once makes Pac walk, and a second tap persuades him to run. As in Pacman, there are occasional power pills giving Pac's legs extra spring, and more importantly allowing him to eat up the baddies.

Progressing from the town you pass through a forest, along canyons with rising and falling log bridges, past lakes and other enjoyable unrealistic scenes. For those of you who like a good joystick waggle, jumping the lakes should provide more than enough wrist exercise.



I cannot say that Pacland ever grabbed me as a coin-op, but it is certainly a very good choice for conversion. The Ghosts 'n' Goblins/Super Mario Bros. game style is not that original, but it is boosted and well-complemented by the very colourful graphics.

The sprites are animated admirably over backgrounds that look like they have come straight out of the Mister Men cartoons. The coin-op's lively music has been reproduced to just as good effect as the original. This is not the sort of game that will be hailed as a revolution in computer entertainment, but Pacland is a delightful change from second-rate versions of the new massive, and more complex arcade machines that too often are thought sufficient for a gullible public. Pacland is amusing, entertaining and really great fun to play. Go buy it, fans of the coin-op, you won't be disappointed.

Price: £9.95 (cass) T.H.
£14.95 (disk)

Graphics: 88%
Sound: 86%
Playability: 90%
Overall: 89%
Rating: MEGA

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Designer Hardware

CCI people these days seem to hang Z88's and other carryable micros around their persons like old fashioned watches. Graeme Kidd doesn't join in the trend.

The rush to take computers on planes and boats and trains is turning into a stampede. But have you ever seen anyone actually using a portable on the way home?

Portable computers are currently enjoying something of a renaissance. Just about every manufacturer, from Sir Clive up, has launched not one, but a complete range of portable computers. The busy executive on the move is spoilt for choice when it comes to deciding what computer hardware trot around with.

Ruggedness, as well as portability, used to be the marketing ploy. Remember the Husky — a super-butch portable that was specially designed to survive in hazardous environments like oil rigs, forests and coalmines? (It was generally pictured in the hands of a Village Person clone in a construction helmet). Nowadays, it is pure designer appeal, at a designer price.

Even Apple is running glossy commercials which aim to convince folks that the only way to really get on and impress the chairman is to sling your clodding great Mac SE into a trendy nylon lug-bag, shove it into the boot of your XR3i every evening and work on the corporate pie charts at home.

The portable PC (with swing-wing, supertwist, backlit-atmospheric-LED lighting rig) is the current status symbol, set to displace the radiophone from the commuter pose stakes. Everyone who is anyone, dahling, has got to be worth at least a BMW and one of those cute little £1,000 computers that you can carry around with you. Forget the filofax —that was yesterday's designer label. It has to be one of those nifty little PC portables, complete with integral carrying case . . . Soon we'll see The Face and I-D reviewing portable computers.

Where do people USE these portable machines? Have you ever seen one on someone's lap being put to serious use? Perhaps it's all going on behind closed hotel room doors across the country, as top executives have affairs with their sexy little Sharp 1500s or cute little Toshiba T1000s . Forget extra-marital affairs, it is all extra-network affairs in today's modern office.

"Yes, I suppose if you are permanently on the move and can't guarantee access to electricity, then a portable comes into its own."

The only place I know where you can almost guarantee to see a portable computer in regular use in Marks and Spencer's stores, where the staff use Psion Organisers as part of the stock control process. (Which is about the right sort of use for a portable computer. Heaven knows why anyone would bother using a Psion Organiser super-calculator for its original application, as a computerised address and telephone book.)

The whole premiss on which portable computers rest is, surely, their very portability. You can take them anywhere, using them on route preferably, and then plonk them down when you arrive in your hotel room, mud hut, anarchist squat or whatever, and start working on those corporate pie charts.

But nearly everybody goes home after work, and nearly everyone travels home by car, bus or train. If you're driving you can't use a computer and you wouldn't fare much better on public transport — even in the First Class compartment of a train, there's hardly room to swing a 3½" disk in the rush hour. Once you've got home, why bother peering myopically into a LCD screen? Surely it would be far better to spend about half the cost of a PC portable on a decent desk-top machine, complete with monster monitor, full-size keyboard and disks that slot straight into the machine on your desk in the office?

In a way, Apple owners probably have the best of both worlds in the form of a portable hard drive unit. Don't bother lugging computers about — buy two, one for home and one for the office, then carry the DATA between them. Smart idea, but the amount of work I'm likely to do at home during an evening or over an entire weekend is likely to fit very comfortably on a floppy disk, thank you. And have you seen the price of Apples? All very user-friendly but nothing cleverer than an Amiga. So the only real advantage of a portable has to be its portability — if you're going away for a week or two and need a computer, then take your portable. Yes, I suppose if you are permanently on the move and can't guarantee access to electricity, then a portable comes into its own. But frankly I'd rather use pen and paper, or enjoy the break from keyboard and screen.

I never was, and probably never will be a techno-junkie. I have resisted digital watches with integral calculators, alarms and musical chimes, I have not the slightest desire for a cellphone so that people can phone my briefcase on the 08.45 to Waterloo, and the last thing I want is a portable computer of any shape or form. I am no computer Yuppie . . . . Then again, at least Amstrad have shot the designers, sat down and thought about portables and come up with something that is really useful at a useful price. Ugly though the box may be, you only need to spend about half as much money to get an Amstrad PPC as you do to get a slick designer rival. And for the price, you get a whizzo, state of the art modem thrown in for free. A stand-alone modem with the same capabilities as the one available inside the PPC machines costs nearly as much as the complete Amstrad package . . . .

So I just might end up buying a portable after all. Only for the modem, you understand . . .

G.K.

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C64

IFFY

BEDLAM

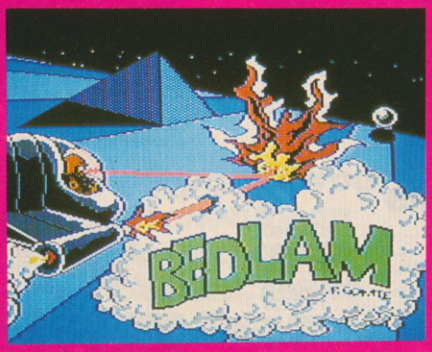
Go!

With the recent arrival of Sensible Software's Shoot 'em Up Construction Kit, life for vertical scrolling blasters is going to be a lot tougher. Also, it is not as if there is any shortage of such games, so I hoped for something a bit special in Bedlam.

For those who like a reason behind their alien zapping, the one supplied with Bedlam is that you are a cadet in a space fighter training school, undergoing your final test. This test is not a couple of hours sweating over a 2000 word essay, but one of reflexes and co-ordination in a space battle simulator made up of 16 sections.

First off, you can choose to play a one player game, a standard two player game or two players simultaneously. The players' ships fly over a smooth-scrolling background set against a starfield. Rather unimaginative square tiles drawn in base-relief make up most of the backgrounds, with pyramids and gun emplacements here and there. Naturally enough, they shoot at you, and you can shoot them back. These really serve to keep the game going between alien waves that swoop on and off the screen occasionally zapping the players. Along the way you will see letters scrolling past. Collecting these will give you temporary invincibility, an extra life, a mine or teleport you to the game's most original feature.

"If you can release the pinball by shooting a lever, you can amass some hefty bonuses by keeping the ball on-screen by shooting it, flapping the flippers and activating all the usual bonus mushroms and switches"

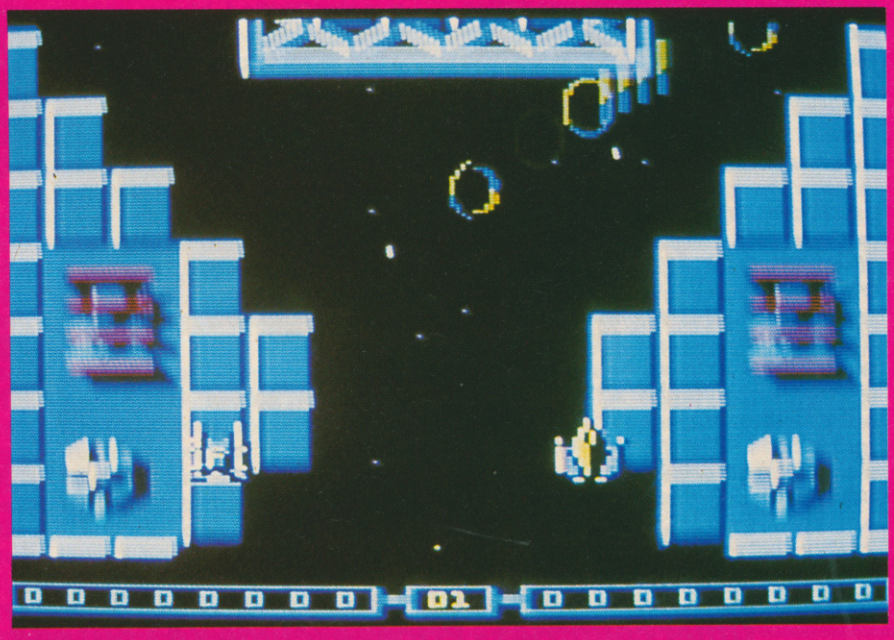


Go through a teleport and you will find yourself in a pinball machine. This, like the rest of the game scrolls at a constant speed. If you can release the pinball by shooting a lever, you can amass some hefty bonuses by keeping the ball on-screen by shooting it, flapping the flippers and activating all the usual bonus mushroms and switches. This makes a nice change from the main game which though exceptionally exciting sets you a really tough task.

A piece of music, matching the rest of the game in the originality department plays on the title screen, but the effects are substantially more interesting.

If it were not for the pinball section, Bedlam might appear a somewhat totally unoriginal and mundane game. Even so, it still remains less than highly impressive game. This sort of release can work very well, but Bedlam's implementation hasn't really got above the acceptable level average. When compared to cheapies such as Denarius or Sensible Software's Designer it does seem rather overpriced. Shoot 'em ups of this kind really need exciting graphics, sound and action, qualities that are too thin on the ground in Bedlam. This is only one for true shoot 'em up addicts, who will certainly find it a tough game to get through even if it does lack the necessary polish. *T.H.*

Graphics: 42%
Sound: 71%
Playability: 40%
Overall: 45%
Rating: IFFY
Price: £9.95 (cass), £11.95 (disk).



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£9.99 Cassette – £14.99 Disk
SPECTRUM 48/128K
£7.99 Cassette
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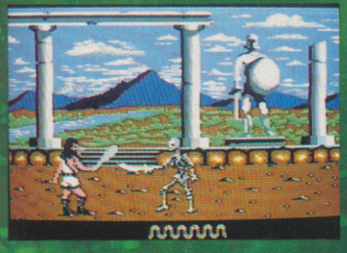
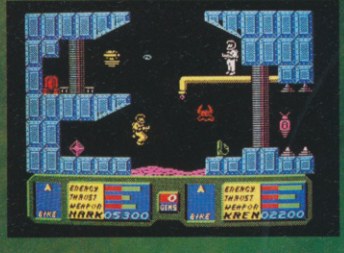


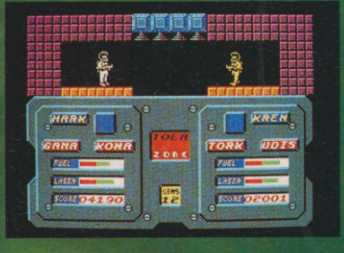
HERCULES –
SLAYER OF THE DAMNED

Son of the Gods, curse of his fellow men, Hercules is set 12 awesome tasks to exonerate the sin of murdering his children. Armed by his divine fathers he sets forth to face the hideous skeleton hordes and ultimately overcome the evil minotaur. To slay the damned is his only saviour in repenting his sins.

BLOOD BROTHERS

"Our blood is mixed,
We are as one,
Let no man or beast come between us,
And let nothing deter us from our aim,
To avenge the deaths of our parents,
And destroy the Scorpians,
DEATH TO THE SCORPIANS"

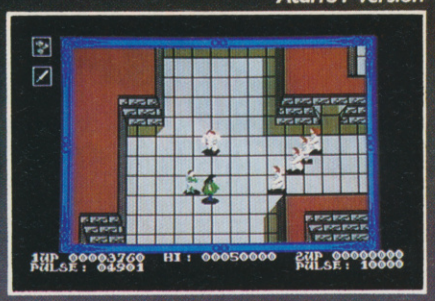




GREMLIN

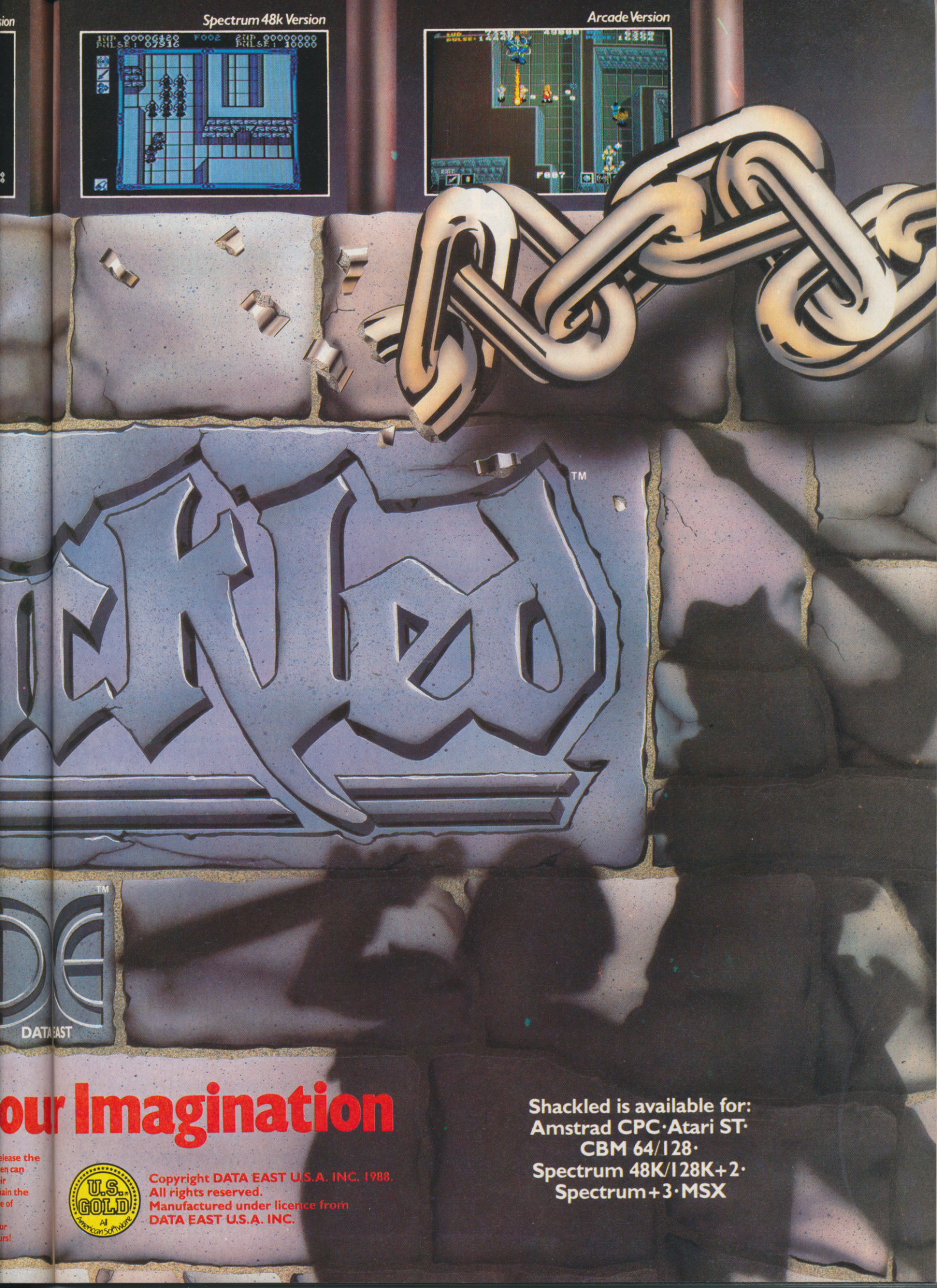
Gremlin Graphics Software Ltd., Alpha House, 10 Carver Street, Sheffield S1 4FS. Tel: 0742 753423

Atari ST Version



Unchain yor

Your friends are prisoners within the mysterious castle. Release t
fetters that bind them and chain them to yourself; only then can
you make your escape. Release as many as you can for their
predicament is dire, though the more you have on your chain the
slower your progress will be! Defend yourself with a choice of
8 different weapons! Battle your way through 112 stages
of gripping continuous action! Defeat your foes, rescue your
friends, escape from every stage; only then is freedom yours!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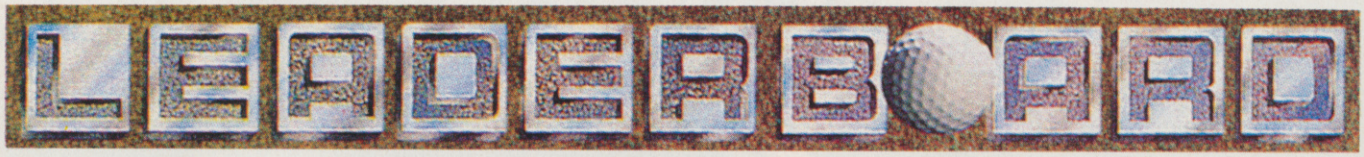
Market Leaders, Access

Which full price game has already been 58 weeks in the charts and has led to a series that would mean it staying there permanantly? Anyone whose mind has not been drowned in budget games knows that there is only one name that wins on that score — Leaderboard.

This astonishingly successful simulation has already assumed the stature of an all-time great home computer game — a popular classic that at one time had two of the series in the charts at the same time! Leaderboard, World Class, Tournament Leaderboard and now Famous Courses the extra courses that are coming along have gained such a loyal audience that it seems not only have they eclipsed all other golf games but created a following that could develop into a cult. In years to come, you could imagine International Leaderboard tournaments played by greybeards on 64 emulators on the home supercomputers of the future, perhaps . . . (Ah, yes, I remember when it came out in '87 — the good old days), even Leaderboard Ist Editions being auctioned at Sotheby's . . . ("Do I hear two million dollars?") Leaderboard conventions in Salt Lake City addressed by holographs of Bruce Carver of Access and U.S. Gold's Geoff Brown.



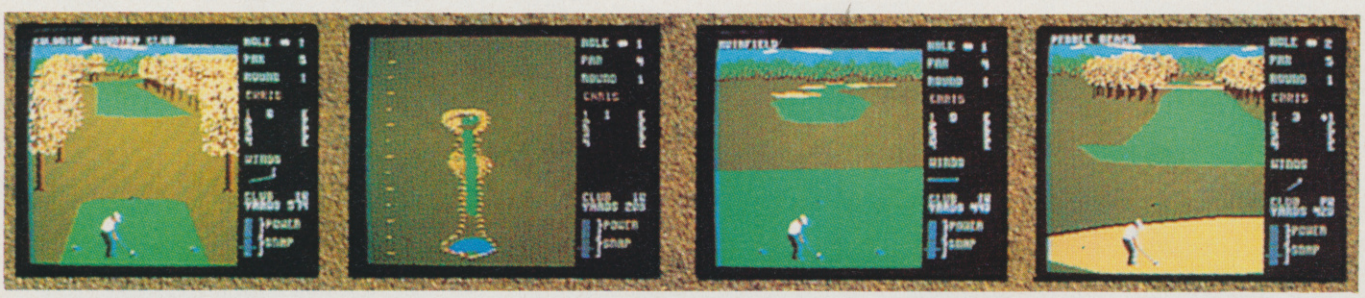
"You could imagine International Leaderboard tournaments played by greybeards on 64 emulators on the home supercomputers of the future"

Why Geoff Brown? Well, Access, the company resonsible for the creation of this worldwide success story did not begin with Leaderboard. They had smash hits before. The first was Beachhead. And that was when their relationship with U.S. Gold began. Geoff Brown, U.S. Gold's founding genius, was looking for high quality products for his fledgling company to distribute in Europe. He approached the Carver Brothers who ran — and still own — Access and told them, "Trust me. I know the U.K. market. I can do pretty good things for you." They believed him and they were right. Beachhead took the European games scene by storm. Access followed up with Beachhead II and Raid Over Moscow both big successes, too.

When Leaderboard came it surprised even their most optimistic expectations. Created originally as just a single idea, it has led to a whole series of variations that continue to offer ever greater challenges. "And at a reasonable price", insists Bruce Carver. "No-one thinks he's being ripped off!" The latest Leaderboard to climb the charts is only £4.99 but has that neat commercial idea of needing another Leaderboard to play through.

Carver is rightly proud of the record Access achieved. They release very few games — about only two major packages a year. They are not only carefully designed for gameplay but planned to work on tape especially for the U.K. market. Such concentrated and careful development has enabled it to remain a relatively small company with only seven programmers led by Bruce Carver's brother — "An excellent programmer . . ." says Bruce.

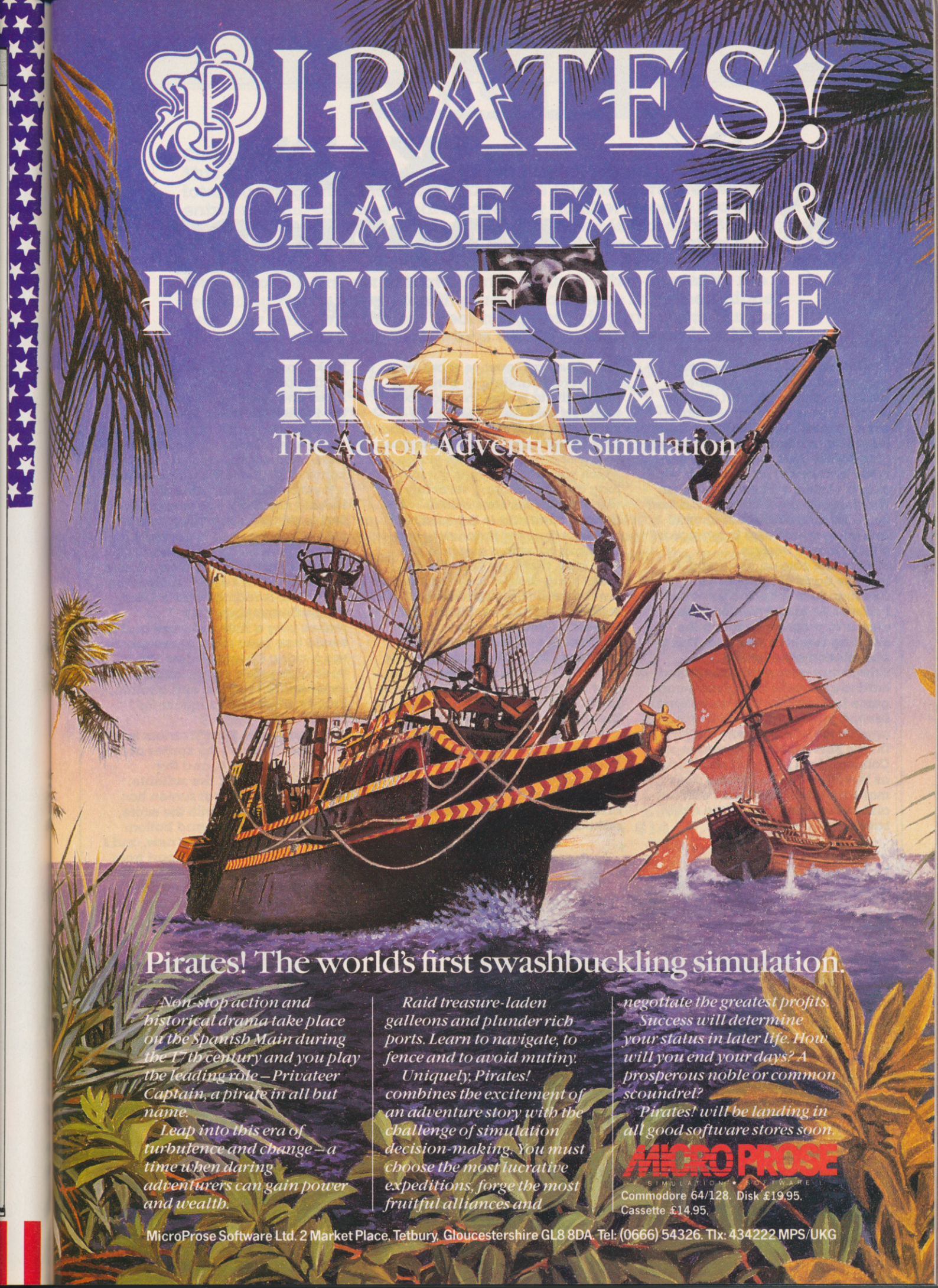
With so few releases Access take enormous care to ensure that each is a hit. "We don't do business in the U.S. as everybody else. We want people who buy our products to think they got more than they paid for . . ."



They certainly must believe that for they flock to buy. During Leaderboard's record 58 weeks in the charts more than a quarter of a million have been sold in the U.K. and Europe alone. In the U.S. equal amounts find their way onto home golf players' screens. Demand like this has made Access a favourite not only of games players but of bankers for

"Beachhead took the European games scene by storm. Access followed up with Beachhead II and Raid Over Moscow, both big successes"

continued on page 101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C64

MEGA

IKARI WARRIORS

Elite

Elite are not known for their speed at releasing games. Paperboy, and even more so Scooby Doo are two games that come to mind, both having extensive publicity and advertising long before their releases. No one could be blamed for giving up hope of ever seeing a 64 version of Ikari Warriors either but the time has now come for fans of the coin-op and indeed everyone else to indulge in a bit of jungle warfare.

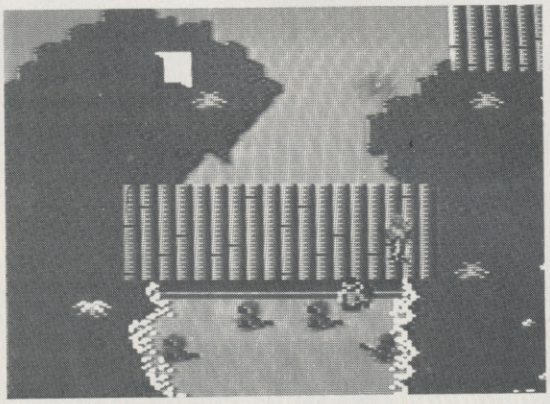
When the coin-op appeared, it took the basis of Capcom's hit Commando and added some new features. As in Commodore, the idea is to progress as far up the scrolling levels as possible. This is one mission even Arnold Schwarzenegger would be pushed hard to complete. In typical arcade game fashion, you and an optional second player have to go it alone against the whole enemy army. Unlike Elite's earlier 64 version of Commando, it is almost as difficult as it really would be, which does make it frustrating to start with but also makes progress all the more satisfying.

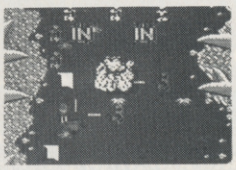
The opening sequence shows your plane crash landing in a tropical forest, giving you all the plot you need. As soon as you leave the wreck, gangs of soldiers waste no time in letting you have it with guns and grenades. The dense jungle in which you landed opens out into a long avenue scrolling vertically with the players. Huts shelter cannons that add to the existing hail of bullets but fortunately can be taken out with a grenade. On your side, there are abandoned tanks lying around the jungle which can be used to plough through soldiers and blow up blockades. Generally, you are safer in a tank because the soldiers are harmless but mines that only become visible a fraction of a pixel before you run over them cause you trouble. There is still a chance if you hit a mine: the smoking gun tells you to jump out a couple of seconds before the thing blows. Even then you have to dodge the shrapnel.

Further along, rivers cross your path and can be crossed by bridges or waded through, which is naturally slower. Helicopters and tanks pose a greater threat, but again can be bombed. Giant stone faces and towns are some more of the scenery variations you can expect.

Some alterations in the conversion were unavoidable, such as the controls. Because the original uses a joystick that twists as well as moving normally, this version does feel a bit different to play. Two modes can be used to control the playesr, one being a standard "face the way you run" method, and the other which keeps the direction the player is facing constant, but lets him move anywhere. This makes play a little awkward and it would hae been more agreeable to see it using Cheetah's new 125 Special Joystick which has four independent buttons and a rotate facility, more than adquate for Ikari.

On the whole, Ikari Warriors is a lot of fun. It is fast, the sprites are small but passable, and the soundtrack and FX are suitable. The original's vertical screen has been well imitated with the score, ammo etc. in the top and bottom borders. It offers nothing new, and I still prefer Commando (apart from its lack of difficulty) but Ikari is one of the better coin-op conversions of late. No doubt addicts the original and lovers of baddie annihilation everywhere will find a generous dose of action to satisfy the driest of joystick palms. *T.H.*





Graphics: 71%
Sound: 74%
Playability: 83%
Overall: 81%
Rating: MEGA
Price: £9.99 (cass), £11.95 (disk).

Charts

Chart Chatter

This month's Charts are not quite but very nearly all change. Out of total 20 top games included in the three Charts, there are twelve new entries — and all three Charts have new number ones — two of them new entries too! The biggest and fastest mover is Ocean's Platoon; as we predicted last month, the first smash of the year. It enters the 64 Chart at Number One — and you can't do better than that! Ocean has four out of the first six in that Chart, with their other new entry the sparkling Firefly taking fourth place. Microprose have their highest ever new entry with Project Stealth Fighter flying in to take Number Five. And Firebird flap their wings with Morpheus rising into Number Eight spot.

The Budgets have four out of five new titles with Mastertronic in the guise of their Ricochet label grabbing One and Two with Ghostbusters (it already sold over a quarter of a million at full price) and Way of the Exploding Fist (created by Greg Barnett in Australia, remember?). Guess who's at Number Three? Yes, Mastertronic dominate that too with last month's top seller Kikstart II. And they've got a big piece of Hewson's Rack It label's Number Four, Battle Valley.

On the 16 Bit Chart, Melbourne House's marvellous Xenon —some say its the best yet on the Amiga — inevitably climbs into the Number One spot. Domark's Starwars — their best game yet? — enters at Number Two. Mirrorsoft also have a strong entry with the gangster-style King of Chicago. (You buy it quick or maybe they make you an offer you can't refuse?) Melbourne House (yes, it's really Mastertronic again!) have the other new entry with Roadwars at Number Four.

C64

	GAME TITLE	COMPANY		Price	Rating
1	Platoon	Ocean	★	£9.95	Awesome
2	Outrun	U.S. Gold	↓	£8.99	Crisp
3	Matchday II	Ocean	↓	£8.95	Mega
4	Firefly	Ocean	★	£9.95	Mega
5	Project Stealth	Microprose	★	£14.95	Awesome
6	Combat School	Ocean	↓	£8.95	Awesome
7	Test Drive	Accolade	↓	£9.95	Mega
8	Morpheus	Firebird	★	£14.95	Mega
9	Predator	Activision	★	£9.95	Mega
10	Alternative World Games	Gremlin	★	£9.95	Mega

Budgets

1	Ghostbusters	Ricochet	★
2	Way of the Exploding Fist	Ricochet	★
3	Kikstart II	Mastertronic	
4	I Ball II	Firebird	★
5	Battle Valley	Rack It	★

Amiga

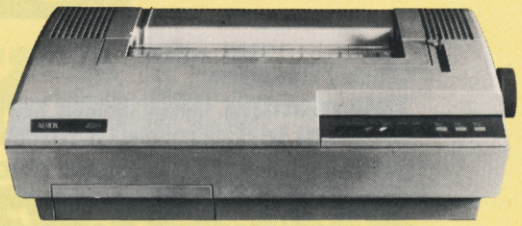
1	Xenon	Melbourne House		£19.95	
2	Star Wars	Domark	★	£19.95	
3	King of Chicago	Mirrorsoft	★	£29.95	
4	Roadwars	Melbourne House	★	£19.95	
5	Backlash	Novagen		£19.95	

★ **NEW ENTRY.**

Who is this rather kinky vixen?

A mysterious girl called Nadia Headlines who claims to have a 'relationship' with Martech tells us you can hear her bark on this number 0323-766616
We think she might be trying to whip up support for a strange game. . . .

with the



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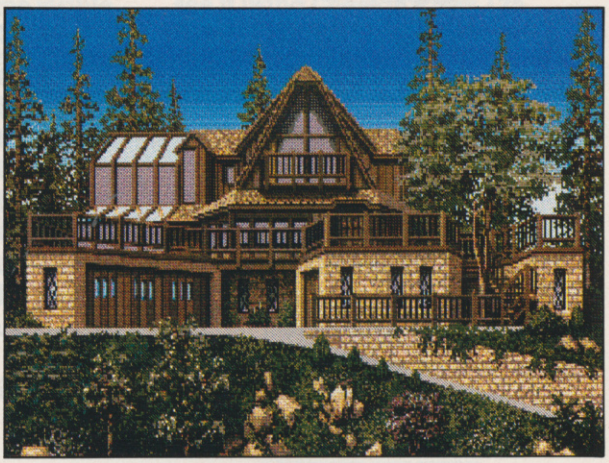

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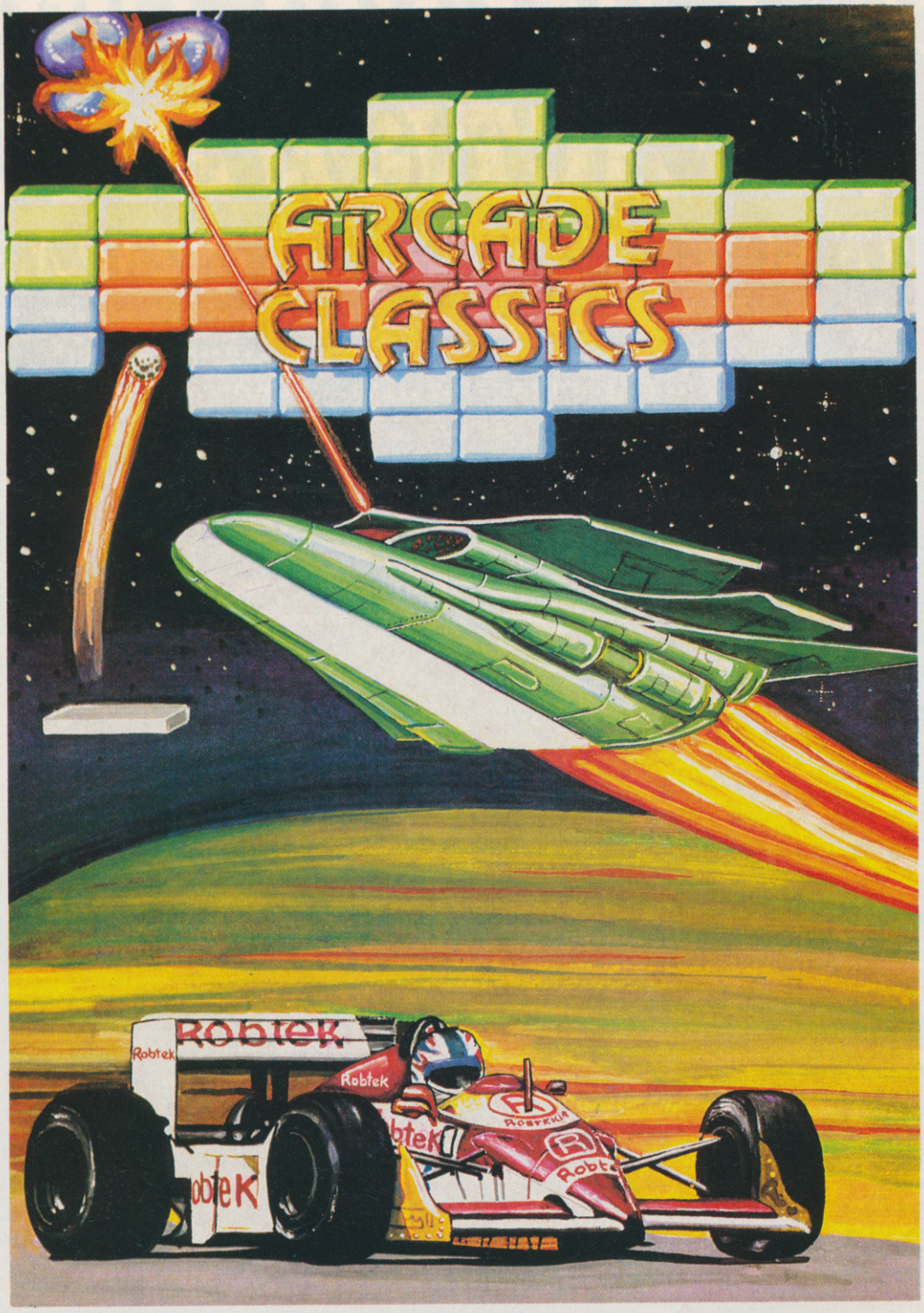

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Disk includes **GRAPHIC SLIDESHOW** for displaying pictures saved with **ACTION REPLAY.** Plus Warp 25, Superboot – non Action Replay owners can speed up their 'expert' or 'freeze machine' programs to see what they have been missing.

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C64

CRISP

THE TRAIN

Accolade

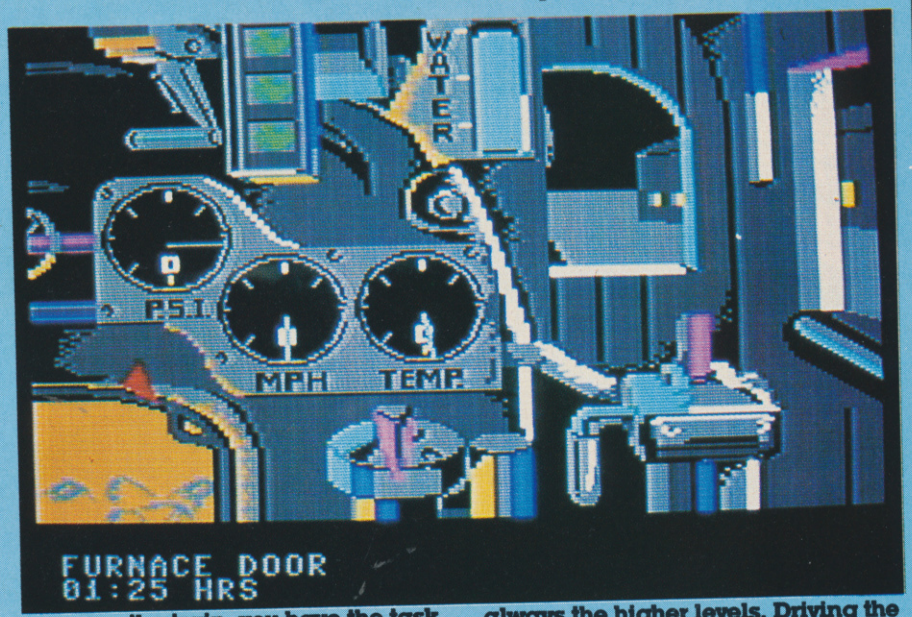
In the last few months, Accolade have come up with a number of good quality original games, and their latest, from the makers of Ace of Aces, comes The Train.

Like Ace of Aces, The Train is set in Europe in the Second World War. This time, you play a leader of the French Resistance. The year is 1944, and the allied force's power is growing. The Germans have taken evasive action in a desperate evacuation of troops and armoury. An armoured train has been filled with France's most treasured pieces of art, to be transported to Berlin and held for ransom. You have organised a mission to rescue the treasurer from Hilter's clutches, with the help of your fellow Resistance members. Well it's certainly a bit different from saving the universe, isn't it?

Your first objective is to capture the train waiting in a siding at Metz station. Your companion, Le Duc has volunteered to switch the points leading onto the main line. The German soldiers in the station have caught on to your game, and pop out from windows taking shots at you with machine guns. Your part involves picking off the soldiers, covering Le Duc until he switches the points. Once that is done you can board the train and set off to your rendezvous at Riviere.

The interior of the cab is well detailed and cleverly drawn, with animated levers and dials

As you would expect, the driving of the train is a major part of the game. Train enthusiasts and ordinary gamers should both find fun in adjusting the knobs and dials in the cab. Using a simple joystick controlled cursor, you control the throttle, furnace, brake, forward/reverse lever, steam blowoff and the whistle. The interior of the cab is well detailed and cleverly drawn, with animated levers and dials. The driving of the train has enough to it to make it feel realistic but without the many almost irrelevant controls that put many people off most simulations. At random points on your journey you come under attack from enemy fighter planes. Manning one of two guns on the train, you have the task of blowing them out of the sky before they blow you off the tracks. The track stretches out into the distance, but could give a better feeling of movement. This can be overlooked however, because of the more convincing movement of the trees.



Consulting the map will inform you of your position, showing the locations of junctions, stations and bridges, helpful for keeping track of your progress. When you approach one of these landmarks you are given a warning at the bottom of the screen. Bridges are dangerous areas for the train due to the gunboats that lurk in the waters. This gives a diversion from driving the train as you sink the boats with another of your guns in a similar style to Beach Head. Some more target practice crops up if you decide to take a station, where you can send and receive messages to and from the Ressistance which could for example warn you of track faults.

Throughout the game, the graphics are atmospheric with authentic design of the train and buildings

Completing the game on the easiest of the three skill levels doesn't take much practice, but then there are always the higher levels. Driving the train is fun, but I suspect it might loe its appeal rather quickly because of its lack of variation. The same applies to the interludes at stations and bridges. Throughout the game, the graphics are atmospheric with authentic design of the train and buildings. A respectable title tune gives way to a good deal of rumbles and chuffs from the engine. I can see that not everyone is going to like The Train, but it certainly makes for an enjoyable, if possibly limited simulation style game. Note: The version reviewed was on disk, and so its multi-load is no problem. Cassette users should take into account the multi-load when deciding whether to buy.

T.H.

Graphics: 82%
Sound: 70%
Playability: 70%
Overall: 72%
Rating: CRISP
Price: £9.95 (cass), £14.95 (disk).

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If you have read the article about Microprose in the "In America" feature in this issue of CCI, you will know about their exciting Pirates game. You may even have already bought a copy. Pirates certainly got rave reviews recently in CCI.

So CCI has arranged with Microprose a terrific competition for all Pirates players. The Winner will get a week's full board luxury holiday for two in the piratical, paradise Isle of Barbados in the exotic West Indies. Microprose are also contributing £300 as an extra treasure chest for the Winner to spend from like a drunken pirate! (Hic!)

The competition will run for 5 months. Each month there will be 5 questions to answer from your knowledge of the Pirates game. With your answers, you must send your highest score in Pirates as a photograph or print-out. And write, in not more than twenty words, why you find Pirates fun.

The top five scores (with correct answers) each month will get a Microprose sweatshirt and a free year's subscription to CCI. The top two scores of each month — ten in total — will be invited to the Personal Computer Show in September at Earl's Court to a Pirates play-off at which the winner will be the one with the highest score and who will, of course, win the glorious piratical Barbadian week and the treasure cash!

You can enter once each month and re-enter with improved ratings if you wish (don't forget the game can be saved to disk).

PIRATES QUIZ

1. What is the highest title you can reach in Pirates?
2. How much is the Incas' gold worth?
3. What is the first member of your family you would rescue?
4. What is the minimum number of men needed to sail a ship?
5. What is the smallest ship you can sail?

PIRATES is fun because ...

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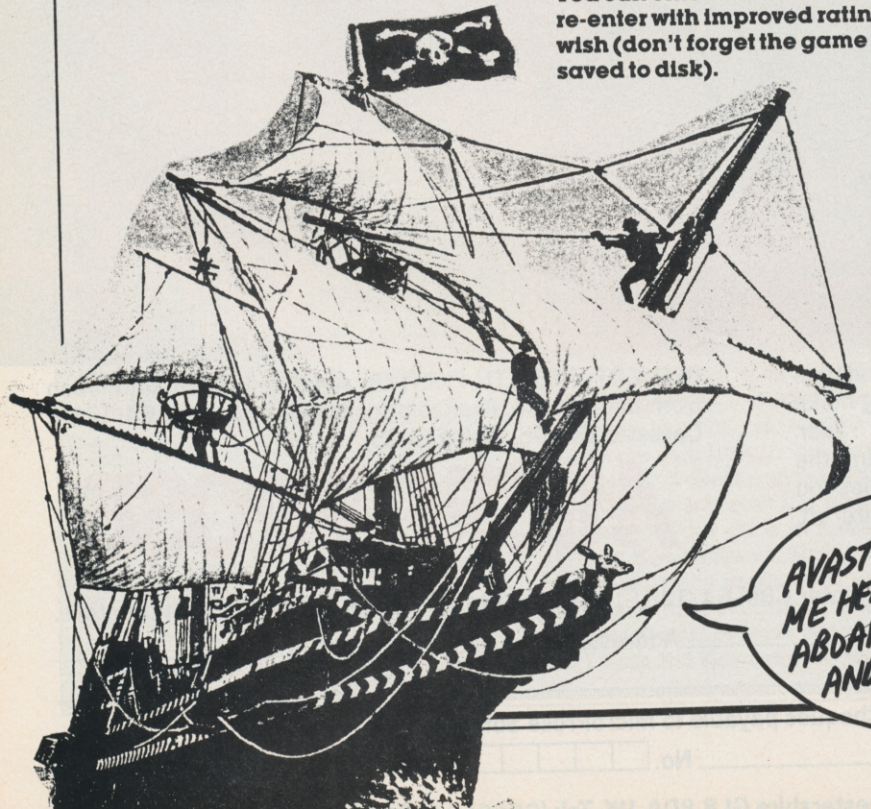
(not more than 20 words).

Answers, plus proof of score, to the Microprose Pirates Competition, c/o CCI.

The entries will be judged each first of the month, and announced in the following issue of CCI.

Anyone, anywhere in the world can enter, but the prize holiday will start from a U.K. airport.

Avast there! Yo, ho, me hearties! Come aboard the Jolly Roger and walk the plank in Bridgetown, Barbados!



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Many thanks to all the people who ordered off us last month.

C64

Iffy

Impact

ASL

When Impact made its first appearance last year it was well received. The Amiga version was attractive and had a number of excellent sound effects to beef-up the game. At the time, it was one of only a few bounce 'em ups on the Amiga, and so was still a fresh game style. The situation has changed since then, especially with the 64; oodles of such games have been released over the last year or so. Not only that, but games such as Krakout and Arkanoid are now available on compilations, so who is going to buy Impact?

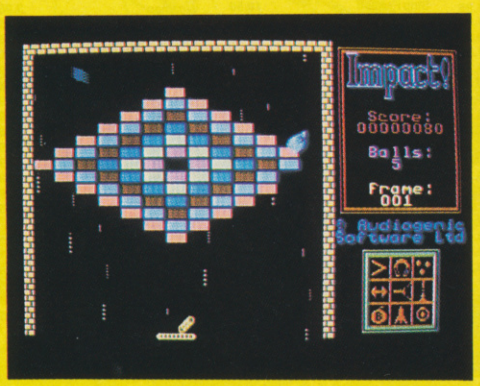
Possibly Impact's biggest drawback is its lack of new features. The bat moves along the bottom of the screen, boucing the ball up to the bricks. Hitting the bricks makes them disappear, and clearing the lot gets you to the next screen with a new formation of bricks. Sound familiar? Help is at hand in the way of spinning tokens that drop from some bricks. Catching one of these moves your add-on indicator one of the nine places further. The cheap add-ons make your task slightly easier, and as you would expect, the more expensive ones are more powerful. These range from one that slows down the ball, to the most expensive that makes it smash through the bricks.

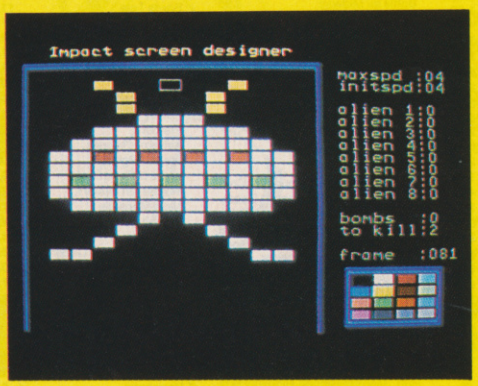
A construction kit is included for designing your own screens. This has to be loaded separately, and any screens designed with it are then saved to tape or disk to be loaded into the main game. It would have been nice to see a joystick control option for this part as the keyboard controls are a bit fiddly. Having to load it separately makes the construction kit rather slow to use.

I liked the Amiga version. Its smooth mouse control and musical chimes made an enjoyable game out of a simple concept. On the 64, there is no mouse option, and the sound effects are understandably not so impressive. I do not want to waffle on about mouse control is better than joystick, but it does make a big difference to the gameplay. To keep the resolution of the Amiga version, all the sprites are one colour. The bricks are colourful and the starry background is smooth, but the sprites are just the same old aliens that appear in all of these games.

I would not recommend Impact for the reason that there are similar games offering more fun and variety, and if you can get one in a compilation, then so much the better. If this had been released at the same time as the Amiga version, it would have fared better, but it wasn't so it hasn't.

B.V.





Graphics: 58%
Sound: 76%
Playability: 37%
Overall: 40%
Rating: Iffy
Price: £9.95 (c), £12.95 (d)

C64

CRISP

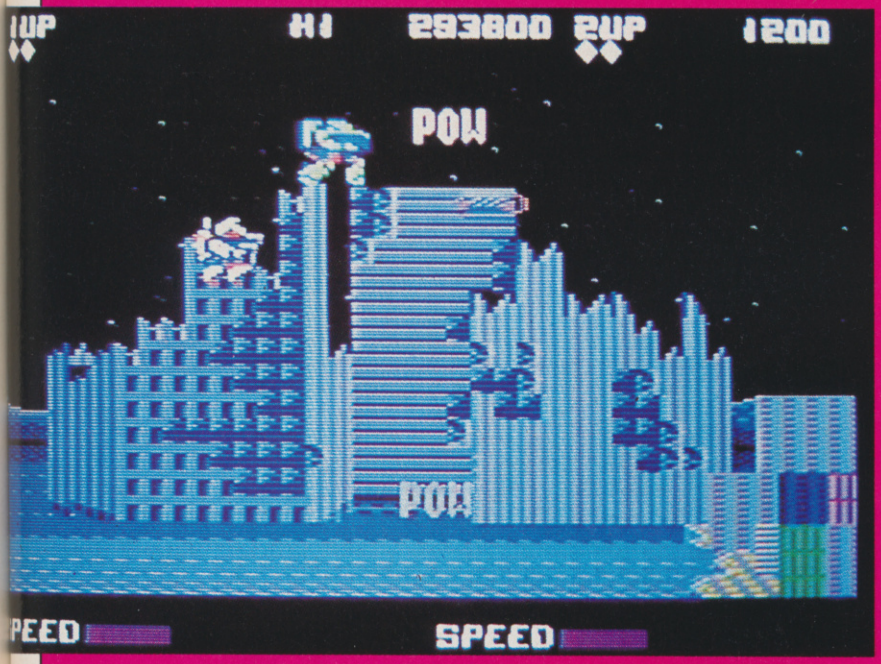
Side Arms

US Gold

When I first played the coin-op Side Arms in the arcades it impressed me with its speed, graphics and hectic action. Being able to get powerful weapons near the start of the game was an attractive feature, but before long its appeal waned. With this in mind I wondered how the inevitably graphically inferior 64 version would shape up.

There are no real surprises in store for those who have played any of the recent Salamander/R-Type range, as it involves flying through right to left scrolling levels fighting off alien attacks. A simultaneous two player mode is one way to improve on a game's fun factor, and Side Arms has just such an option. The game starts out over the ruins of a futuristic city. Rotating aliens glide towards you kamikaze-style. When shot, some leave behind POW symbols. Collecting a POW speeds up your on-screen jetman, but more powerful weapons can be obtained by shooting the POWs before collecting them. Using this method you can upgrade to flame throwers, three way lasers or tail guns.

You and your optional team mate jet around the screen with the current background scrolling slowly behind you (the short vertical scrolling part has disappeared). A feeble guardian waits at the end of each level; a glowing ball emits a few more aliens, taking a few shots to destroy. Cassette users will not be pleased to hear that each level has to be loaded separately, breaking up what action there is. If the backgrounds were long or particularly detailed, I could understand this, but they are not. They are made up of simple bricks and blobs repeated very obviously, which fail to impress.



"It has the great advantage of not using the Gauntlet style mini figures, offering much larger and attractive characters."

Later levels and aliens do not reward the players with better looking graphics, although a more lethal weapon upgrade is available further on in the game. The two player mode certainly does make it more fun to play, but although some might say not to the extent of Gauntlet or Supersprint for instance. It has the great advantage of not using the Gauntlet style mini figures, offering much larger and attractive characters. Do not expect any aural wonders from uncle SID either; the sound effects could hardly be simpler, and the music sounds little like the frenzied space war the game attempts to simulate. The three skill levels ensure that everyone will be able to get through most of the stages and provide a strong element of challenge.

Side Arms does offer enjoyment for dedicated shoot 'em up fans. It will also gain favour among the many thousands of fans of the coin-op. They will undoubtedly find it great fun especially the two player mode. Recommended.

B.V.

Graphics: 59%
Sound: 35%
Playability: 66%
Overall: 59%
Rating: Crisp
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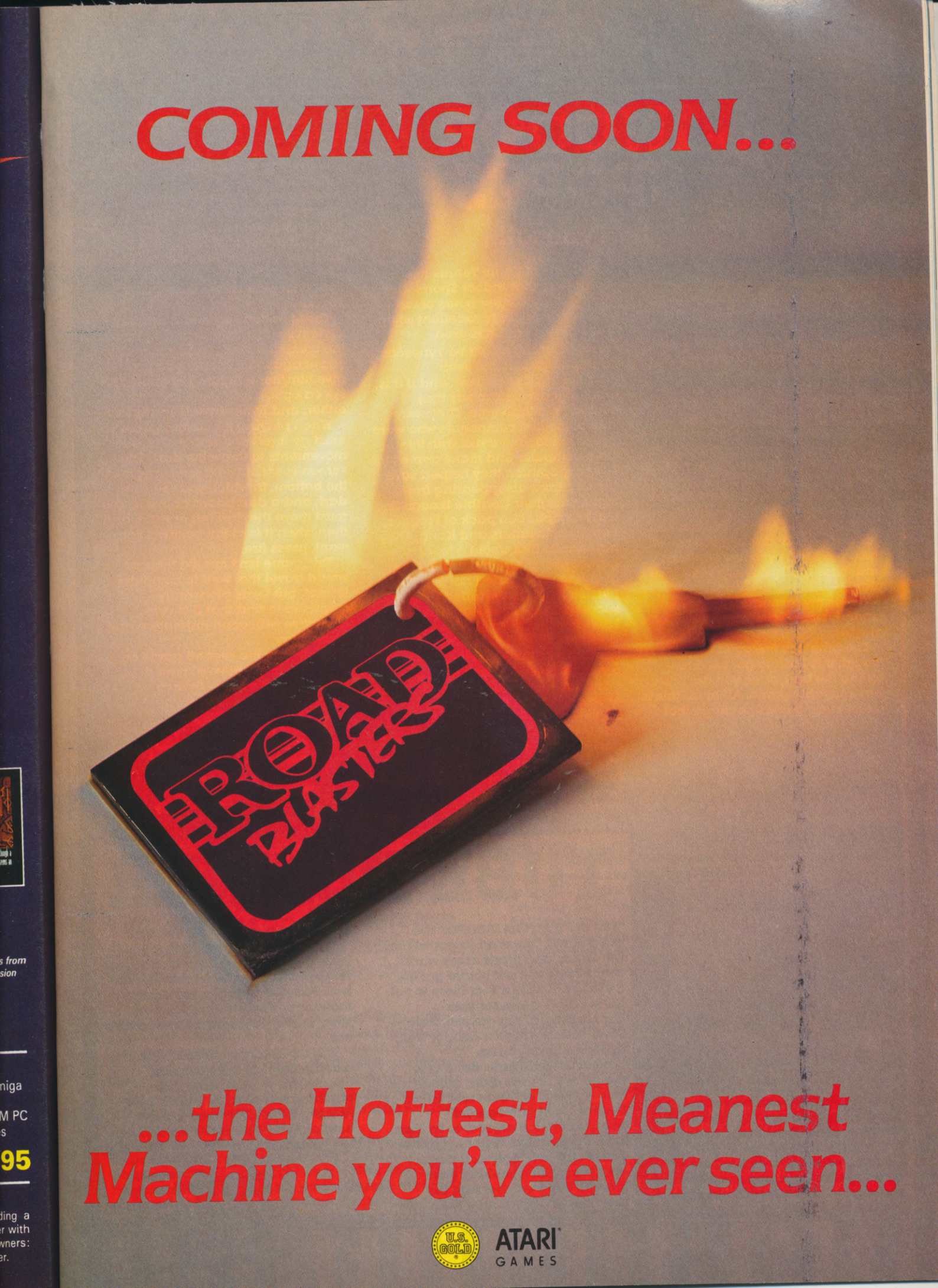
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ATARI GAMES

MEGA INDOOR SPORTS

by Tynesoft

It contains the same kine of options as darts.

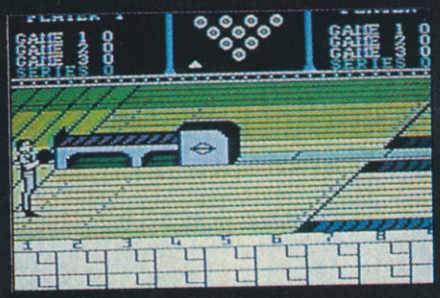
This game is much more difficult to play than darts, and it takes a long while for you to get used to bowling, even I had trouble getting the hang of it, and I'd already played this game before.

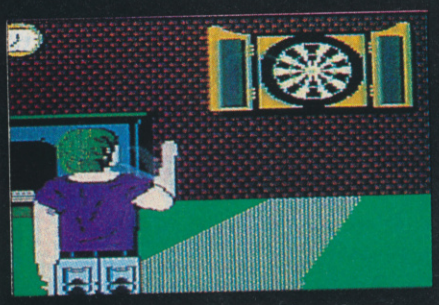
I don't know if it's because I've played this game before but I did not find it very enjoyable. The graphics are good, and the method of play is not slow but I don't like the game itself. Last year I thought this game was good and so I won't put it down too much because perhaps I have changed my taste a little.

Table Tennis is the last game of this package and is on side two of the tape. Again you have options, and these really do help when you play.

This is my favourite game of the lot and it surpasses any other I have played.

The graphics are good and though it is hard to get used to hitting the ball, once you do, it is a very playable game. All in all this is a first class games package that





has only a few flaws. These flaws are totally outnumbered by attention to detail (i.e. if you play well the computer plays slightly better). Despite this, there still seems to be something about it which does not quite make it a top game. Perhaps it is just the familiarity of Table Tennis itself. Apart from that Indoor Sports will give you quite a few hours of fun and it is especially excellent when the 2 player option is used.

I think that this might be Tynesofts final plunge into the ever decreasing C16 market, and if it is, well, at least we can say they ended on a high note. They were one of the first companies who were prepared to take a risk with this little computer and make games for it. In my opinion they helped save the C16 from disappearing from sight, with their (terrible though it was) compilation pack of Frogger, Pac-Man, Invaders and Kong. They have faced flak about a lot of games over the years and instead of giving up just tried harder. This persistence has rewarded them with successes like European Games, Liberator and their best game ever — Phantom. Add to that list, Indoor Sports and I think you'll agree that's a very impressive track record.

Indoor Sports was released a year or so ago on the C64 and faired quite well. It's transition to the C16 has lost it the Air Hockey event, and put in, instead Table Tennis. The other 2 events are Ten Pin Bowling (previewed Summer of 1987) and Darts. The game is, of course, a multiload and contains 2 events on side one and another on the second.

Side one starts off with darts, and you are presented with these options:
A solo game: 1 player game (computer opponent); 2 player game; or a demo.
And a number of starting and finishing options like doubles etc. And computer Beginner, Average, Superstar skill levels. Also game speeds.

These options allow a handicap system so if you're playing against the computer you can cheat, and if you're against a friend, you can give him/her a fighting chance. The speed option isn't there for show either, and hyperdrive is *really* fast.

When playing the actual game yo must go through a series of joystick movements to throw the dart. The screen is set out with a rectangle at the bottom, in which you see your dart, and a dart board above it. You must move the dart left or right, and then when it is at the position you want, press fire.

This game isn't one I'd thought would travel that well to computer format, but I was pleasantly surprised to find that it is very attractive with good animation and game play.

Bowling is the second game on side one, and I have played it before — last year — in fact!

Graphics: 74%
Sound: 47%
Playability: 73%
Overall: 76%
Rating: Mega

TUBE RUNNER

"You are the TUBE RUNNER" the blurb starts, "doomed to run within the drains and pipes of my world". I could continue, but you've got the message. It seems that there is not too great a reason for your imprisonment, you are just there — Tube Running is your hobby! Well, whatever turns you on.

What Gremlin have done is to merge two of their older games into one — Petals of Doom and Sword of Destiny. Both games were acceptable and enjoyable in their time. Though now they look rather dated and probably in a perfect world Gremlin would not have brought them out, but with the shortage of C16's it may well have seemed almost a public service.

This game is not terrifying. You have a very limited life which seems to last little more than a minute or two. Because it decreases as you move, and fire power which can shoot about 10 aliens before fading out.

It is a pity that so little C16 stuff is coming out now but I suppose people are so desperate that anything will soon be better than nothing. If you buy Tube Runner hold on to it, it might be valuable in ten years time.

C.K.

Graphics: 60%
Sound: 25%
Playability: 43%
Overall: 41%
Rating: IFFY

they are one of the most profitable entertainment software houses in the U.S. Nevertheless they maintain a rather low profile and stay a comfortable distance from the glamour areas of California's Silicon Valley, having been located in the Mormon capital of Salt Lake City, Utah.

Their highly professional but quiet approach means they let their products speak for themselves avoiding the hype that others think necessary. Partly they can do that because their fans buy on the Access name almost irrespective of the product. They appear, in general, Access research shows, to own about four products each, which at two a year, means around two years production . . .

This strong brand loyalty enabled Access to survive the difficult times between 1984 and 1986. Carver believes that the fall in the home computer entertainment market was partly due to hyped-up poor products. "They helped to turn the American public off. There was too much junk . . . too much crumby software . . ." But unlike others, Access has stayed loyal to the 64 computer. "If you had to put your bet on a long running machine, that was it. And we're still supporting it. We're going to follow it till it kicks its last! Or until anybody can figure out how to make the IBM as friendly as it is! Yes we are developing on the Amiga . . . We've got a new version of World Class Leaderboard coming out. We have even produced an arcade version for the Amiga — where you can build your own course . . . We think the Amiga is a good long term machine . . ."

"They maintain a rather low profile and stay a comfortable distance from the glamour areas of California's Silicon Valley"

Though the Leaderboard series goes on selling, Access has been preparing itself for another blockbuster. Late Spring should see on your screens another release that Access believes will make home computer entertainment history. This is a "simulation adventure" called Echelon. This is the code name for a top secret military facility located on the planet Isis — the tenth of our solar system. You the player are a ISF pilot commanding a C104 patrol craft flying assignments that require top flight skills, patience and logic.

"Late Spring should see on your screens another release Access believes will make home computer entertainment history"

Echelon is intended to outdo any other similar game with a brilliance of graphic presentation and technical detail that could be considered state of the art. One of its most interesting features is a voice activated control headset. No, not on screen but on your head — a kind of speech joystick — wittily called Lipstik. This will be sold seperately and will let you feel just as if you were in a cockpit.

Echelon has 3D space flight vector graphics and three different weapon systems. While there is a 72 page operations manual, Carver claims, the craft will be easy to fly, though there are thousands of objects you must avoid in the Patrol zone. There are also some neat technical touches like a remote control vehicle and a teleportation system that lets you turn on a camera and be "collected".

"He is certain that its unique combination of arcade action, graphic adventure and flight simulator will make it a smash hit"

Of course there are enemies which gives you the chance of getting involved in the arcade sequences as well as the simulation parts. So it becomes a two-tier game that, in true Access style, will be provided with additions and sequels.

Carver believes it will succeed worldwide not just because of the excitement it generates but also because of the attention to detail that has been put into it. In Leaderboard, one of the attractions was the life-like motions of the computer player. This was achieved by videoing Carver's programming brother and transposing the ball-striking figure frame by frame, onto a computer screen. Using this sophisticated video and movie technique (Rollerscoping, Carver called it), it was possible to imitate exactly the motion of people. This technique has also been used in Echelon. "Most products have the effect of making the user's brain switch into feeling. This isn't real but if you do it right, they'll think it real . . ." says Carver. It is this level of reality acceptance that Access is shooting for with Echelon. Carver points out that one of the factors that made Beachhead so popular was the credible movement of the people in it and he is sure Echelon will impress even more.

"One of its most interesting features is a voice-activated control headset"

Echelon has already been more than a year in development. Yet Carver reckons it will come out faster than any other product they have produced. He is certain that its unique combination of arcade action, graphic adventure and flight simulator with multiple choices will make it a smash hit as soon as the first version — probably the Amiga — arrives. That will probably be followed quickly by the IBM and then the 64/128 formats.

1988 looks like being a busy year for Access because by Fall they are planning to release two Access products. Two! Though the U.S. was the initiator of mass production, its entertainment software companies seem to have moved in the opposite direction. Successful organisations like the creators of Leaderboard realise the need to specialise, produce outstanding games that take a lot of time and money. Once the loyalty of the player has been won, however, the returns can be high. 58 weeks in the charts and still in there fighting . . . One a year like that would be enough for most people . . .

Watch out for Echelon, Carver believes it could outdo Leaderboard. He looks and sounds like a sensible, realistic guy . . . and Access have a good record for backing up what they say. But beating Leaderboard . . . They breed determined optimists and ambitious silicon dreamers in Salt Lake City . . . in America.

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HORGAN'S HINTS

I received a letter from Warren Prydderch who claims to know absolutely nothing about his 64 or how to reset it. The safest way is to buy a specially made switch or cartridge (look through the ads in this issue), which will keep a machine code program in memory and allow you to alter it with pokes. A more risky method is to make your own switch to connect pins 1 and 3 of the user port, or 2 and 6 of the serial port. Unless you know what you are doing, I suggest you buy a ready made switch to avoid seriously damaging the computer.

For anyone wanting to poke games themselves, a cartridge with built-in monitor can be used to examine the program, where you could for example search points where the accumulator is loaded with the number of lives. You could then change this to the one you want. One of these cartridges and a good book on machine code should set you on your way.

For his constant supply of pokes and tips, R Troughton wins this month's £10, T-shirt and subscription, so we will open with a selection of his contributions.

C64

Cosmic Causway:
100 DATA 32, 86, 245, 169, 96, 141, 99, 8, 32, 16, 8, 169, 173
110 DATA 141, 116, 50, 141, 95, 58, 76, 160, 33
120 DATA FOR **L=592 TO 613:READ A:POKE L,A:NEXT:SYS 592**
130 REM (C) ROBERT TROUGHTON — DECEMBER '87
Enter and run this listing before loading the game, and you will be blessed with infinite lives. Alternatively, reset after loading and enter these pokes for the same effect.
POKE 12916, 173:POKE 14943, 173 SYS 8608

Thundercats:
On level 14, the arrow tells you to go left. Ignore this and go right, where you will find a jet. Board this, fly left and you will be able to pass the high ledge and complete the game. Now for the pokes . .

```
100 DATA
169,1,170,160,0,32,186,255,169,0
110 DATA
32,189,255,162,1,160,8,32,213,255
120 DATA
169,243,141,243,3,169,207,141,244
130 DATA
3,76,13,8,169,0,141,26,4,169,208
140 DATA
141,27,4,76,132,255,169,173,141,16
150 DATA 137,76,13,8
160 C=0:FOR L=53202 TO 53255:READ A
170 POKE L,A:C=C+A:NEXT
180 IF C=6194 THEN SYS 53202
190 PRINT "DATA ERROR"
```

The next lot come from Sean and Ade Meads.

Firelord:
Enter and run this listing:

```
10 REM ** SEAN AND ADRIAN MEADS. HI
TO DAS J. AND DOZ **
20 FOR Z=340 TO 372:READ
A:C=C+A:POKE Z,A:NEXT
30 IF C<600 THEN PRINT "ERROR IN
DATA!":END
40 SYS 340
50 DATA
32,44,247,162,2,189,103,1,157,209,1
6,247,56
60 DATA
32,108,245,96,76,106,1,169,173,141,
89
70 DATA 22,141,94,243,76,0,9
```

Head Over Heels:
Enter and run this listing before loading the game with infinite everything.

```
5 REM ** SEAN AND ADRIAN MEADS
TOTAL HACK-HI TECH LADS/GIRLS **
10 FOR I=53229 TO 53261:READ A:POKE
I,A:NEXT
20 SYS 53229
30 DATA
32,44,247,32,108,245,169,0,141,61,4
,169,208
40 DATA
141,62,4,76,99,3,169,0,141,154,122,
141,126,117
50 DATA 238,32,208,76,80,0
```

Thanks go to Alex Vinall for this listing.

Hunter's Moon:
Enter and run this, then load the game with immunity to everything.

```
1 REM CHEAT BY ALEX VINALL
2 FOR A=50176 TO 50231:READ BV
3 POKE A,B:NEXT A
5 PRINT "PLEASE INSERT TAPE"
6 SYS 50176
7 DATA 32,44,247,169,10,141,177,3
8 DATA
169,238,141,178,3,169,172,141
9 DATA 179,3,32,108,245,169,173,141
10 DATA
249,193,169,93,141,25,35,141
11 DATA 70,35,169,0,141,242,193,76
12 DATA
226,193,169,21,141,39,192,169
13 DATA 196,141,44,192,32,191,3,96
```

Carlton Davis has sent me these handly listings.

Bubble Bobble:

```
10 REM BUBBLE BOBBLE
20 REM HACKED BY C. DAVIS
30 REM (C) 1988
40 FOR A=53216 TO 53255:READ B:POKE
A,B
50 C=C+B:NEXT
60 IF C=4165 THEN SYS 53216
70 DATA
```

Gauntlet:
Stephen Moran proves "You don't need a reset switch" with these quick cheats.

```
10 REM GAUNTLET
20 REM HACKED BY C.DAVIS
30 REM (C) 1988
40 FOR A=276 TO 300:READ Z:POKE A,Z
50 NEXT:SYS 62806:POKE 1046,240
60 DATA 162,0,142,41,186,142,60,160
70 DATA
142,129,189,162,71,142,84,173
80 DATA
142,125,198,142,180,196,76,20
90 DATA 9
```

This next batch are from one Fred Flintstone.

Paperboy:
If you had a problem with the listing in the February issue, try this for invincibility.

```
10 REM SMASHED BY FRED FLINTSTONE
20 PRINT CHR$ (147) "NOW TYPE LOAD
(RETURN)"
30 FOR A=300 TO 355:READ B:POKE
A,B:NEXT
40 DATA
169,76,141,242,3,169,248,141
50 DATA 243,3,169,252,141,244,3,76
60 DATA 13,8,169,167,141,48,3,169
70 DATA 2,141,49,3,169,208,141,38
80 DATA 8,169,32,141,39,8,1169,96
90 DATA 141,43,8,169,123,141,45,8
100 DATA 169,35,141,46,8,76,13,8
```

Enter and run this, then load the game. At the first opportunity, type **SYS 300** and when READY appears once more, type **SYS 318.**

Thing Bounces Back:
On the title screen enter YJOMH to get into the cheat mode (the border will change colour).

Crystal Castles:
Run this and load the game for infinite lives.

```
0 REM HACKED BY FRED FLINTSTONE
1 FOR X=320 TO 359
2 READ Y:POKE X,Y:NEXT
3 SYS 320
4 DATA 32,44,247,32,108,245
5 DATA 169,83,141,251,2,169
6 DATA 1,141,252,2,76,229
7 DATA 2,169,96,141,103,5
8 DATA 169,1,141,104,5,76
9 DATA
0,4,169,165,141,152,162,76,23,128
```

Fungus:
Type EASY GAME on the high score table for infinite lives.

Parallax:
Enter these codes for higher levels:
STACK — Level 1
JEWEL — Level 2

HORGAN'S HINTS

PARCH — Level 3
SALON — Level 4
GLOBE — Level 5

Iridis Alpha:
Load reset and enter:
POKE 23006,76: POKE —23061,30: POKE 23062,90 for infinite lives.
SYS 16384 starts the game.

Xevious:
Load reset and enter:
FOR I=5663 TO 5637: POKE I,234: NEXT: SYS 5000 for infinite lives.

Trapdoor:
Load, reset and type:
POKE 14914,96 for infinite energy
SYS 14336 to restart the game.

Agent X 2:
Load the game and reset before entering:
POKE 37321,240 stops aliens appearing
POKE 37293,165 complete game immediately
SYS 49152 starts the game.

Quedex:
Enter the Thalamus phone number (07356) 77261 in the designer mode and keep changing the last number for different effects.

Gerry the Germ:
This one couldn't be easier. Simply use the + and — keys to go through the levels.

Bubble Bobble:
Another cheat for Bub and Bob: get to level 50 without losing a life and a magic door transports you to level 70. Get to level 20 without loosing a life a another door takes you to the bonus screen. This also happens on levels 30,40 etc..

Marble Madness:
To skip the levels, type **LOAD** (not shift+run/stop). When READY appears, type **POKE 1011,248: POKE 1012,252: RUN.** This leads to the rest of the problem. When READY appears again, type **POKE 2066,** (number of levels to start on). Then type **SYS 49152** to play.
This next batch are from one Fred Flintstone.

Spikey Harold:
Load and reset the game, so you can enter these pokes to get rid of all this nasty.
POKE 30605,169
POKE 30606,15
POKE 30607,234
POKE 30608,234
POKE 30609,234
SYS 28672 to start the game.

Thing Bounces Back:
On the title screen enter YJOMH to get into the cheat mode (the border will change colour).

Ghosts 'n' Goblins:
These pokes don't need a reset, and do a bit more than just give infinite lives. For those with a switch, just enter the pokes at the end. If you don't have a reset switch, follow these steps to get the game to reset. Type **LOAD** (not shift+run/stop) and press play on the tape. When READY appears, enter:
POKE 1010,76
POKE 1011,248
POKE 1012,252
RUN (which loads the next part)
When READY makes another appearance, enter:
POKE 816,167
POKE 817,2
POKE 2086,252
SYS 2061 (to load the next bit)
On the next READY prompt, enter:
POKE 816,167
POKE 817,2
POKE 2086,248
POKE 2087,252
SYS 2061 (to load the last part)
If you have a reset switch, load the game, reset and enter any of the following. Non-reseters can now do the same.
POKE 44242,42 for a smart bomb effect
POKE 7086,15 turns zombies into bags
POKE 2358,234 these three
POKE 2359,234 gives infinite
POKE 3269,234 lives.
POKE 2214,(1-5) choice of weapon (1=sword, 2=torch, 3=dagger, 4=meat cleaver, 5=shield)
POKE 2203,(0-3) choice of level
POKE 2240,(1-9) minutes on timer
POKE 3901,0 unlimited time
SYS 2128 starts the game.

C16

Mike Peirce comes to the rescue of frustrated C16 gamers.

```
Load, reset and enter:
POKE 9077,234
SYS 8192
```

Joey:
Still the infinite lives keep coming. Simply...
POKE 5760,234
SYS 4128

Crazy Golf:
Load the game and reset as soon as it loads, then type:
POKE 6890,0
SYS 12288

Icicle Works:
Play up to 10,000 points for infinite lives.

Bubble Trouble:
For infinite lives, simply enter monitor and type: 71B76 EA EA EA (RETURN)
X (RETURN)
RUN (RETURN)

Xargon Wars:
Play the game and enter the monitor (when alive) and type:
>**1C86 FF** (RETURN)
G 1C80 (RETURN)
Choose 0 lives on the title screen for 255.

Tycoon Tex:
Go into the monitor, and type:
>**1827 FF** (RETURN)
G 1800 to start. Again, choose 0 lives for 255.

Kung Fu Kid:
Enter the monitor when the border turns grey at the end of loading, then type:
>**2B06 FF** for 255 lives
>**263C X** where x is the level 1-8 (1 is the hardest)
G 2000 to start

Space Sweep:
Load, reset and enter:
POKE 9077,234
SYS 8192

Mayhem:
Infinite lives for reactor deactivators, with this poke.
POKE 6624,234
SYS 4492

AMIGA

Barbarian (Pysgnosis):
Using the main keyboard, press these keys in turn for loads of men: 0 4 — 0 8 — 5 9.
Would you like to become one of the elite megabeings in possesion of a CCI T-shirt, a year's subscription to your fave mag and ten whole quid? Of course you would, so send me those tips, pokes and maps now!

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Tony Horgan

Star Wars

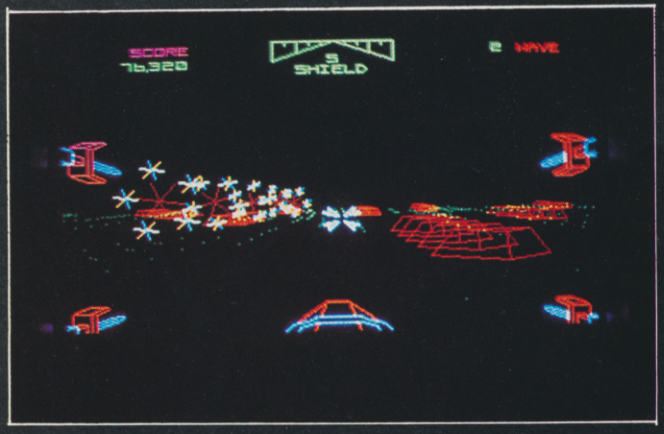
Domark

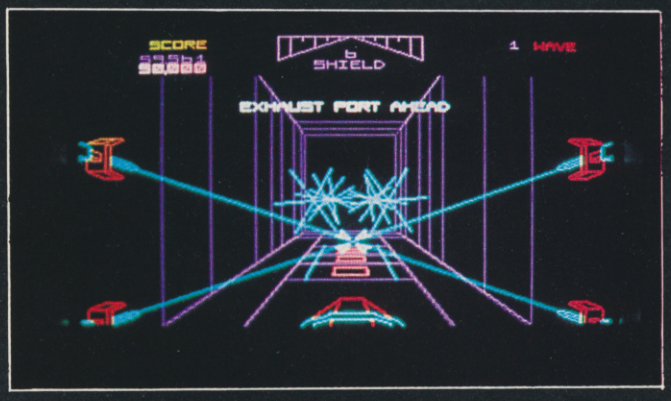
I cannot say that Star Wars was ever one of my favourite coin-ops, but is has to be credited for introducing a very original game style that has since been the inspiration for a good many home computer games. At last, it has appeared on the Amiga, and it has to be praised for certainly keeping up the high standard of the few Amiga coin-op conversions we have so far had the pleasure of playing.

Three of the most exciting scenes from the film have been recreated with you playing the part of Luke Skywalker. Your mission to destroy the Deathstar begins after selecting one of three skill levels, the harder ones giving higher bonuses. From the cockpit of your X-wing fighter you can see the Deathstar in the distance, guarded by fleets of Darth Vader's minions. Throughout the game, the view is in 3D vector graphics, moving far smoother than the plodding 64 version. A flight path to the Deathstar is automatically controlled, leaving you to sort out the baddies. Taking out their fireball missiles are your first concern, but the ships should also be blown away at the first opportunity. Reaching the Deathstar takes you to the second stage.

Anyone not familiar with the coin-op could be forgiven for thinking this was copied from Starglider, but it was in fact the other way round for Star Wars appeared in the arcades well before the 'Glider' made its appearance on the home series.

Swooping low over the surface of the artificial star, the ground rushes below you while a multitude of





towers loom up towards you. Once again, it is a matter of surviving the enemy's attacks. Fireballs need to be fought off, and shooting the tops of the towers earns you more points. The graphics are very effective, especially as your ship sharply banks left and right giving you a very realistic feeling that you are actually there.

The final scene takes place in the trench encircling the Deathstar. Once again, fireballs threaten to wear down your shields. Catwalks stretch across the trench at differing levels, and combine with vertical barriers restricting your movement. To a lesser extent than the second stage, the vectors provide a convincing and exciting environment. The climax of the game comes as you put a shot into the exhaust port at the end of the trench, blowing up the Deathstar. A disappointing explosion follows, accompanied by some speech sampled from the film, before the whole thing starts again.

A few more sampled voices do well to enhance the atmosphere, as do also the powerful sound effects. The graphics are simple, but at least they are fast, as they should be on the Amiga. Star Wars is great for a quick game, but once you've played through it few times, I am not sure that its appeal will last tremendously long. Nevertheless if you are a fan of the original, coin-op or movie, you will love this and the frighteningly fast excitement it provides. At last, Domark have come up with a game that you will have more fun playing than chucking in the bin.

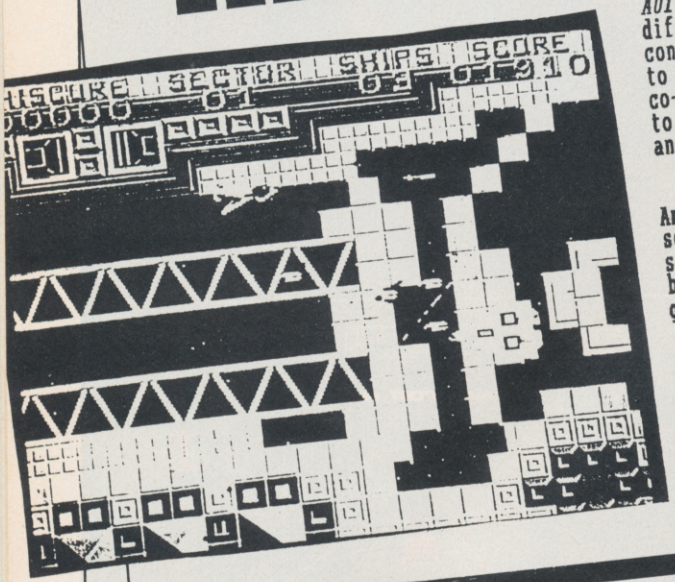
T.H.

Price: £19.95

Graphics 7
Sound: 9
Playability: 8
Value: 8

COMPETITION

XR35 CHALLENGE



AUI reviewers found Anco's new arcade-style XR35 one of the most difficult games ever on the Amiga. It needed a whole lot of time and concerted effort even to get past the first level. It is a shoot-em up to challenge the hottest Amiga shot. You need a speed of reflex and co-ordination of eye and hand that are lightning fast and real stamina to resist the mindblowing sequence of attackers of all shapes, sizes and colours.

So we think there ought to be an Anco XR35 Challenge for the real Amiga hot shots. We want anyone who completes this testing game to send *AUI* a photograph, print or slide, clear enough to read the final screen or your highest score. Write your name, address and age on the back of the print or attach it to the slide. We don't think we are going to be buried in photos! XR35 is too tough a game for that.

The top eleven scores get the prizes. The outright winner will receive an Amiga disk drive. The other ten will get one of the very first copies of the next - still unnamed - game by Anco's brilliant UK programmer P. Baroni who created XR35. They tell us the next game should be out within three months.

Photos, names etc. must reach *AUI* - addressed to *Amiga User International*'s XR35 Challenge - by May 31st 1988.

STRIP POKER PREVIEW

One of the early successes on the Amiga was the classic computer Strip Poker released by Anco. The Amiga's sharp graphic qualities, of course, made the game more explicit than any previous computer version and Strip Poker, featuring attractive German girls, achieved so much popularity that Anco were besieged with eager buyers wanting a second try at beating Anco girls at poker and getting the totally revealing reward.

So Anco are releasing the sequel called - yes, you guessed it - Strip Poker II. This time the girls are English. However we can authoratively deny that Anco's ex-model marketing boss Karen Graham is one of them. Though the rumour is that she might be one of the beauties on the forthcoming Strip Poker Data Disks that will offer more Anco lovelies for skilled poker players to bet their pants against.

Strip Poker II will sell at £14.95 and the Data Disks - you will need the main Strip Poker disk to play them - at £9.95 each.

We have also heard whispers that Karen is personally selecting good-looking guys for an Anco male stripper version for the Amiga. If you think you qualify, buy the Strip Poker II first and see if you are as attractive to the girls as Anco's sexy poker players are likely to be to the average male.

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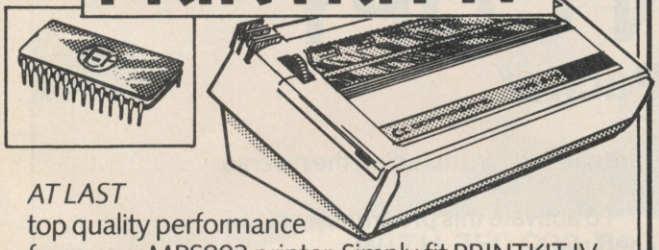

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C64 BORDER REMOVER

by Mark Cherriman

This program reprograms the VIC chip to display the top and bottom borders as a normal part of the screen. This allows any sprite that you defined to be displayed in this area. There are many uses for this, e.g. Icons, Scores of games, without disrupting the main screen display.

To activate this program, load and run, then type SYS 49152.

If nothing happens, just reset with RUNSTOP/RESTORE then SYS 49152.

(This is due to the C64 sometimes getting into an unknown state, depending on whatever the machine was doing prior to running Border Remover.)

```
0 REM ********************
1 REM C64 BORDER REMOVER
2 REM MARK CHERRIMAN
3 REM ********************
4 REM
10 L=1000:C=0:CS=0:E=0
20 FORD=49152TO49255
30 READA:POKED,A:CS=CS+A:C=C+1
40 IFC<15THENNEXT
50 READ DS:IF DS<>CS THENPRINT"ERROR IN LINE ";L:E=E+1
60 IF D>49255ANDE=0THENPRINT"DATA OK.":STOP
70 IFD>49255ANDE<>0THENPRINT"# FAULTY LINES=";E:STOP
80 C=0:CS=0:L=L+10
90 NEXT
1000 DATA 120,169,031,141,013,220,169,250,141,018,208,173,017,208,041, 1919
1010 DATA 127,141,017,208,173,026,208,009,001,141,026,208,169,000,141, 1595
1020 DATA 255,063,169,044,141,020,003,169,192,141,021,003,088,096,173, 1578
1030 DATA 025,208,141,025,208,173,017,208,041,247,141,017,208,169,050, 1878
1040 DATA 141,018,208,169,077,141,020,003,173,013,220,104,168,104,170, 1729
1050 DATA 104,064,173,025,208,141,025,208,173,017,208,009,008,141,017, 1521
1060 DATA 208,169,250,141,018,208,169,044,141,020,003,076,049,234, 1730
```

SCREEN COPY

by A. Packer

This is a nice simple routine that you can use within your own programs to provide a printed display of the screen. All the normal C64 chars. are catered for, including the reverse set.

To activate this program, just load and run.

```
100 REM *****SCREEN COPY*****
110 REM *BY A PACKER 14.2.88*
120 REM ********************
130 LET F=40
140 LET C$=""
150 FOR B=1024 TO 2023
160 LET A = PEEK(B)
170 POKE B,31
180 REM**POKE TO CHR$ CODE**
190 IF A=>0 AND A<=31 THEN LET C=A+64
200 IF A=32 THEN LET C=32
210 IF A=>33 AND A<=63 THEN LET C=A
220 IF A=>64 AND A<=95 THEN LET C=A+32
230 IF A=>97 AND A=<127 THEN LET C=A+64
240 IF A=>128 THEN GOTO 380
250 REM *** BUILD UP LINE ***
260 LET C$=C$+CHR$(C)
270 IF LEN(C$)=F THEN GOSUB 300
280 POKE B,A
290 NEXT
300 REM *****PRINT LINE******
310 OPEN 1,4
320 PRINT#1,C$
330 LET C$=""
340 LET F=40
350 CLOSE 1,4
360 IF B=2023 THEN END
370 RETURN
380 REM **INVERSE CHARACTERS**
390 LET C$=C$+CHR$(18):LET F=F+1
400 IF A=>128AND A<=159THEN LET C=A-64
410 IF A=160THEN LET C=32
420 IF A=>161AND A<=191THEN LET C=A-128
430 IF A=>192AND A<=223THEN LET C=A-96
440 IF A=>225AND A<=255 THEN LET C=A-64
450 LET C$=C$+CHR$(C)
460 LET C$=C$+CHR$(146):LET F=F+1
470 GOTO 270
480 REM ********************
```

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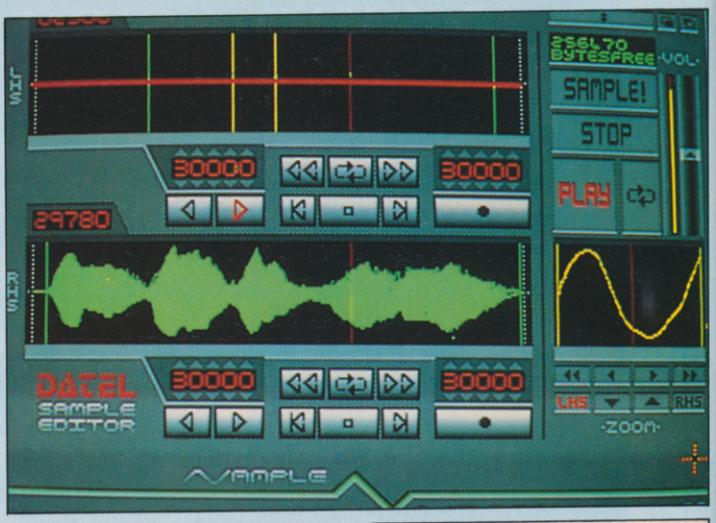

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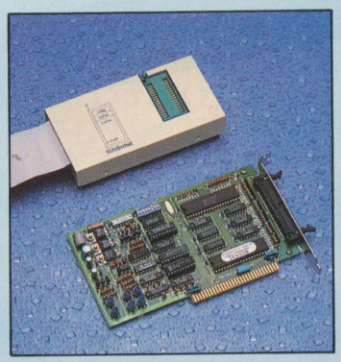

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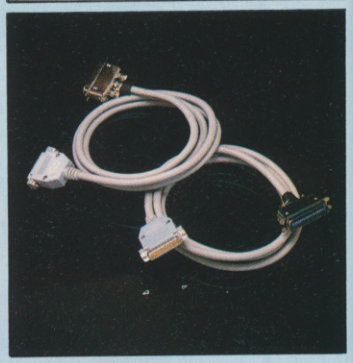

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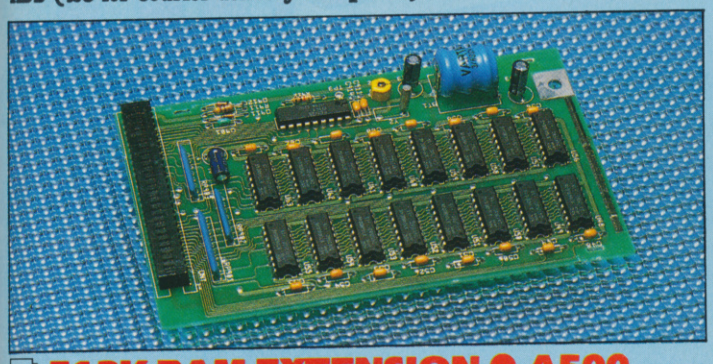

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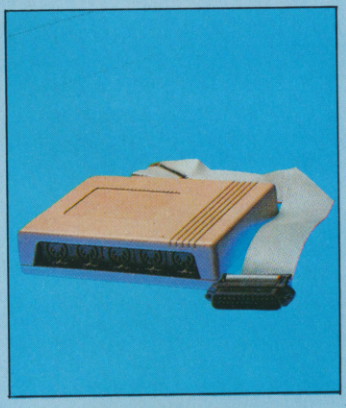

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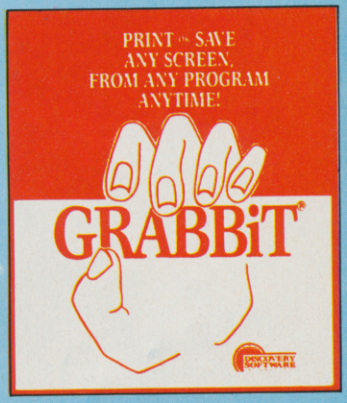

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FUNCTION KEY DEFINER

by Mark Denby

This isyet another solution to an old but troublesome problem... setting the C64's function keys. Mark Denby makes it easy with this short and helpful utility.

The program is one which allows the user to define the function keys on the right hand side of the keyboard. Once the program is entered and run the keys are defined by SYS49354, "f1, f3, f5, f7, f2, f4, f6, f8". Each key may have no more than ten characters assigned to it. If you wish a return to be transmitted after the string then use the left arrow key at the top left hand side of the keyboard. The program is just about self explanitory really.

Mark Denby (aged 14½)

```
0 GOTO 10
1 :
2 :****** FUNCTION KEY DEFINER ******
3 :
4 :****** BY R MARK DENBY 1988 ******
5 :
6 :SYS49345,"F1,F3,F5,F7,F2,F4,F6,F8"
7 :
8 :* USE LEFT ARROW  KEY FOR RETURN *
9 :
10 L= 49152
20 FOR X=0 TO  13 :T=0:FOR Y=0 TO 14
30 READ A:IF A <0 OR A >255 THEN 60
40 POKE L,A:L=L+1:T=T+A:NEXT
50 READ A:T=T-(INT(T/256)*256)
60 IF T<>A THEN PRINT"DATA ERROR IN LINE"1000+(X*10)"CHECKSUM <>"A:STOP
70 PRINT 1000+(X*10)"OK":NEXT
80 SYS49345,"RUN←,LIST←,CONT←,GOTO,LOAD,SAVE,VERIFY,POKE"
90 :THE 6502 DATA FROM $C000 TO $COCA
100 :
1000 DATA 120,162,192,160,114,142,021,003,140,020,003,088,096,160,000,  141
1010 DATA 152,153,000,193,200,208,250,169,010,133,253,032,115,000,201,  021
1020 DATA 044,240,015,153,000,193,200,196,253,208,241,032,115,000,201,  043
1030 DATA 044,208,249,032,115,000,164,253,072,169,010,024,101,253,133,  035
1040 DATA 253,170,104,224,090,208,218,160,070,185,000,193,201,034,240,  046
1050 DATA 008,200,192,080,208,244,076,094,192,169,000,153,000,193,200,  217
1060 DATA 192,080,208,248,160,000,185,000,193,201,095,208,005,169,013,  165
1070 DATA 153,000,193,200,208,241,076,116,164,169,003,036,162,208,070,  207
1080 DATA 169,254,044,142,002,208,063,165,197,201,007,240,057,201,003,  161
1090 DATA 208,002,169,007,056,233,004,048,046,201,004,016,042,133,253,  142
1100 DATA 173,142,002,010,010,101,253,010,133,253,010,010,101,253,133,  058
1110 DATA 253,169,193,133,254,160,000,177,253,153,119,002,240,005,200,  007
1120 DATA 192,010,208,244,132,198,169,064,133,203,076,049,234,032,000,  152
1130 DATA 192,032,115,000,076,013,192,000,000,000,000,000,000,000,000,  108
```

'Cup and Dice'

Peter McDonald presents a deceptively simple form of computer conjuring trick with which, he tells us, even a novice can make a little magic.

Mozart and a third-rate but arrogant musician were listening to a new piece by Haydn. The other musician criticised the music and then said: 'I would never have written it that way!' 'No,' replied Mozart, 'neither would I. And do you know why? Because neither you nor I would ever have as good an idea as that.'

I wish I felt that this little program is, in computer terms, up to Haydn's standard, but I know it isn't. It is not meant for the masters. It is for the novice on the Commodore 128, though with little adaptation (e.g. to SLEEP, GETKEY and SCNCLR which are Basic 7.0 items) it would work on the C64 and perhaps even on other basic machines.

Though it is meant for entertainment, it is not a game in the usual sense. It is more like a conjuring trick, with the computer telling you how many spots there are on top of a die (singular form of dice, though it always sounds pedantic) hidden under a cup. Of course the machine isn't really clairvoyant. The program is mathematical.

I hope its comparative brevity will recommend it to those readers (like myself) who will sometimes sit down and list a short-ish program but never seem to find time to type out hundreds of lines. This has only 27 lines, written in increments of 10 (which makes it easy for you to use the AUTO feature within 128 mode).

You are asked to have a cup and three dice handy. The program guides you through the stages: throw the dice; type in the numbers from the tops; turn them all upside-down; turn one upside-down again and place the cup over it. Count the spots on top of the two visible dice, type the total in, and the computer will tell you how many spots there are on the hidden die.

The program is designed to conceal the simplicity of the method. The screen clears from time to time so that the 'victim' (to whom you are demonstrating this wonderful machine) will forget exactly what information he has supplied, and what the moves were.

Analysed, they are these:

1. The dice are thrown.
2. The number on top of each is typed in. (This is 'dressing'; the program requires the *total* of these three numbers; how the total is made up is really of no importance.)
3. We have called this total 'X' (see Line 130).
4. When three dice are reversed, the total of the numbers on their tops will be equal to 21-X. This is because numbers on the opposite sides of a die always total 7.
5. The die which is to be covered is reversed once more. That brings it back to its original position.
6. Provided you know the total of the spots on top of the uncovered dice, you can work out the number on top of the covered die. How? As the opposite sides add up to 7, the tops of the two uncovered dice, after the first reverse, will be equal to 14 (i.e. 2 x 7) minus their original values. Expressed differently, 14 minus their new top numbers (we call the total of those numbers 'D'; see Line 110) will equal their original numbers. But if you take the total of those two original numbers from X, you are left with the original value of the hidden die (see Line 140, where 'Q' represents the top number on the hidden die). And since the computer knows from the INPUTS, what A, B, C, and D are, it can work out how many spots were originally on top of the covered die (which is back in that position, having been reversed twice).

Of course it is not necessary for you to know (or understand) all that; you can type out the program, let it guide you through the stages, and keep its secrets from all, including yourself!

A few words about the listing. First of all, I have printed it on a STAR NL-10 in Commodore mode, which avoids the use of those funny symbols which appear on the front face of the keys and are so puzzling until you become familiar with them. In fact, nothing requires explanation except the expressions RGHT (after the INPUTS) and DOWN in Line 180. These indicate movements of the cursor and when typing out the program you simply move the cursor the required number of places in the required direction, within the inverted commas. You will see the symbols appear on the screen.

The SLEEPS and extra PRINTS are there for cosmetic purposes, so that the text does not appear too suddenly or in bunched-up lines. Lines 160 and 170 allow for two possibilities: (i) that there is 1 spot on top or (ii) several spots. After all, you don't want your computer printing, 'There are 1 spots . . .' do you? So if Q=1, Line 160 is executed; if not, Line 170 comes into effect. Both lines use the GOSUBs on Lines 260/270 to complete the 'box' started by GOSUB 240. You might say that there was no need for a GOSUB on Line 150. It is true that the contents of Lines 240/250 could have become Lines 151/152. But it is easier typing out the rows of asterisks when all the lines are next to each other.

Absolute beginners might note that END comes in Line 200, i.e. before the GOSUBS. Unless END was inserted there, the computer would try to execute the GOSUBs if the answer to Line 180 was not 'Y' (if it IS 'Y', then, of course, the computer is redirected to Line 10 and the routine is restarted).

Although I prefer the GETKEY command (it helps with the layout since the text comes in a PRINT statement which can be used with TAB) I had to use some INPUTs here. The totals which have to be entered could, of course, equal ten or more, and GETKEY only works with a single character answer. But at least the novice who types out the program will see examples of both.

Hope you get some fun from this, and learn a little (even if it is how to improve on my handywork).

P.M.

```
  CURSOR COMMANDS"
  TO AVOID CONFUSION WITH THE GRAPHIC CHARS USED
  FOR CURSOR CONTROLS
  THE FOLLOWING HAS BEEN USED TO INDICATE THEM.
  CURSOR UP    = {C/UP}"
  CURSOR DOWN = {C/DN}"
  CURSOR LEFT = {C/LF}"
  CURSOR RIGHT= {C/RT}"

10 SCNCLR:REM:"CUP AND DICE"; (C) PETER MCDONALD
20 PRINT TAB(6)"THIS IS A MYSTERY USING THREE DICE AND A CUP": SLEEP 2:SCNCLR
30 PRINT:PRINT:PRINT TAB(6)"THROW THE THREE DICE"
40 SLEEP 2:PRINT:PRINT
50 INPUT"{C/RT}{C/RT}{C/RT}{C/RT}{C/RT}{C/RT}NOW TYPE THE NUMBER OF SPOTS WHICH
ARE ON TOP OF THE FIRST DIE";A: PRINT:PRINT
60 INPUT"{C/RT}{C/RT}{C/RT}{C/RT}{C/RT}{C/RT}NOW TYPE THE NUMBER OF SPOTS ON TOP
 OF THE SECOND";B
70 PRINT:PRINT:INPUT "{C/RT}{C/RT}{C/RT}{C/RT}{C/RT}{C/RT}NOW DO THE SAME WITH T
HE THIRD";C:SCNCLR
80 PRINT TAB(6)"NOW TURN ALL THREE DICE UPSIDE DOWN":PRINT:SLEEP2:GOSUB 210:
90 PRINT:PRINT:PRINT TAB(6)"TURN ONE OF THE DICE UPSIDE-DOWN AND PUT THE CUP OVE
R IT": GOSUB 210:
100 SLEEP 2:PRINT:PRINT
110 INPUT"{C/RT}{C/RT}{C/RT}{C/RT}{C/RT}{C/RT}ADD THE SPOTS ON TOP OF THE TWO UN
COVERED DICE AND TYPE THE TOTAL";D
120 SCNCLR
130 X=(A+B+C)
140 Q=X-(14-D)
150 GOSUB 240
160 IF Q=1 THEN PRINT TAB(6)"*  THERE IS 1 SPOT ON TOP OF THE DIE UNDER THE CUP
  *":GOSUB260:GOTO 180
170 PRINT TAB(6)"* THERE ARE ";Q;"SPOTS ON TOP OF THE DIE UNDER THE CUP *":GOSUB
 260
180 PRINT:PRINT:PRINT TAB(11)"{C/DN}{C/DN}{C/DN}{C/DN}{C/DN}{C/DN}{C/DN}WOULD YO
U LIKE TO REPEAT THE EXPERIMENT (Y/N)?"
190 GETKEY Y$: IF Y$="Y" THEN 10
200 END
210 PRINT:PRINT:PRINT TAB(10)"PRESS Y TO PROCEED"
220 GETKEY X$: IF X$="" THEN 210
230 SCNCLR:RETURN
240 PRINT TAB(6)"*****************************************************"
250 PRINT TAB(6)"*                                                   *":RETURN
260 PRINT TAB(6)"*                                                   *"
270 PRINT TAB(6)"*****************************************************":RETURN
```

★ Program Submission ★ Procedure

DO NOT submit any programme or routine that you do not either own or have proper authority to do so.

ALWAYS include your name, address and the date on all material and any disclosures. Do not forget to make it clear exactly which computer/s your programme or article is applicable to.

Include Kickstart or Workbench versions wherever they are pertinent.

Number all pages.

If you have to submit work which is hand-written then you must make sure it is printed clearly.

Never use stables. Use paperclips if necessary.

If possible save programs on disk twice and call the second file "BACKUP".

Remember to label all disks with your name and the title of the programme.

Always ensure that disks are well packaged. They should ideally be sent in a commercial disk mailer or at least packed between two pieces of hardboard or rigid plastic.

Please allow at least 8 weeks for acknowledgement as all programmes have to be thoroughly tested and made into a suitable format.

Enclose a self-addressed stamped envelope or package if you would like your programme to be returned.

★ Programming tips ★

Try to keep instructions within the programme itself at a sensible level. You can expand on them within the accompanying text if necessary.

TEST your programmes before submitting them or even better get a friend to test them for you.

Disk Manager

CCI is genuinely international. A Pakistani reader from Karachi has sent us in this useful program. Mahmood Hasan Merchant has written a Disk Manager utility, for the 64. It contains a neat basic program that lets you create a disk manager on disk (not much use putting it onto a cassette, is there?) Thank you, Hasan, keep at it!

```
1 REM ********************************
2 REM *     BASIC GENERATOR  FOR     *
3 REM *                              *
4 REM *    D I S K  M A N A G E R    *
5 REM *                              *
6 REM *  WRITTEN IN JANUARY 1988 BY  *
7 REM *    MAHMOOD HASAN MERCHANT    *
8 REM *          PAKISTAN            *
9 REM ********************************
10 REM
20 DIMD(175,14)
25 PRINT CHR$(147)"          DISK MANAGER/GENERATOR";CHR$(17);CHR$(17)
30 FOR X=0 TO 175:T=0: FOR Y=0 TO 14
40 READ A: IF A<0 OR A>255 THEN 70
50 D(X,Y)=A:T=T+A:NEXT
60 READ A:T=T-(INT(T/256)*256)
70 IF T<>A THEN PRINT"DATA ERROR IN LINE"1000+(X*10)"CHECKSUM <>"A:STOP
80 PRINT1000+(X*10)"OK":PRINTCHR$(145);:NEXT:PRINTCHR$(17)
90 PRINTCHR$(18)" SAVING TO DISK ":INPUT "ENTER FILENAME";F$
100 IFLEN(F$)=0 OR LEN(F$)>16 GOTO 90
110 OPEN2,8,2,F$+",P,W":PRINT#2,CHR$(1);CHR$(8);
120 FOR X=0 TO 175: FOR Y=0 TO 14
130 PRINT#2,CHR$(D(X,Y));: NEXT: NEXT
140 CLOSE 2
150 PRINT: PRINT"DISK MANAGER GENERATED!": END
1000 DATA 012,008,010,000,158,032,050,048,054,050,000,000,000,169,000,  079
1010 DATA 141,032,208,141,033,208,133,074,133,075,133,069,169,088,160,  005
1020 DATA 015,032,030,171,162,017,169,240,133,250,169,004,133,251,160,  144
1030 DATA 000,169,066,145,250,160,020,145,250,160,039,145,250,024,165,  196
1040 DATA 250,105,040,133,250,165,251,105,000,133,251,202,208,226,024,  039
1050 DATA 162,022,160,000,032,240,255,169,079,160,016,032,030,171,169,  161
1060 DATA 000,168,162,065,134,251,133,250,145,250,200,208,251,230,251,  138
1070 DATA 166,251,224,096,208,243,032,057,015,032,252,012,162,000,134,  092
1080 DATA 064,134,065,134,250,162,096,134,251,162,049,142,238,016,032,  137
1090 DATA 127,013,032,035,013,176,009,032,148,013,032,070,015,076,014,  037
1100 DATA 008,162,002,032,198,255,032,207,255,164,064,145,250,230,064,  020
1110 DATA 208,245,230,065,200,177,250,240,006,032,056,013,076,138,008,  152
1120 DATA 032,204,255,032,148,013,166,065,202,138,010,010,010,133,068,  206
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continued on page 125

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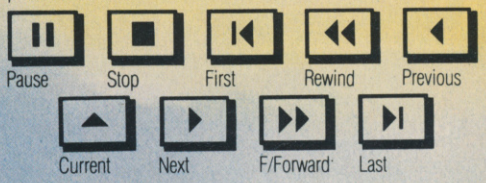

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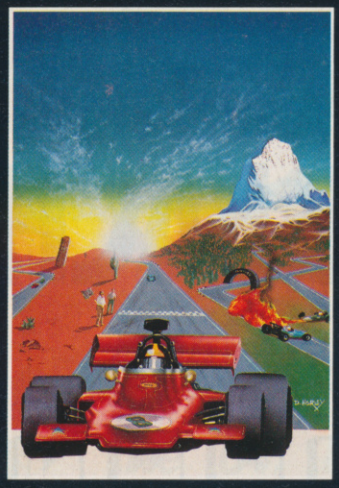

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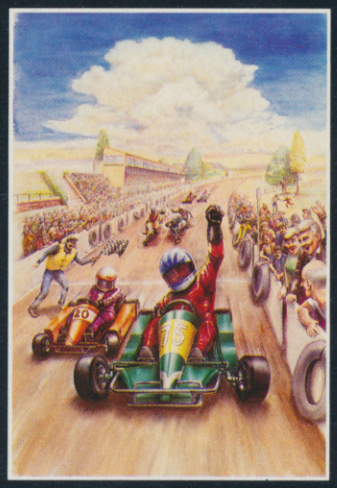

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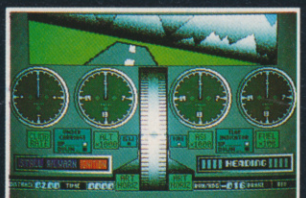

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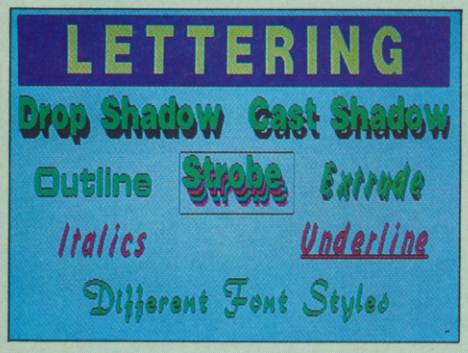

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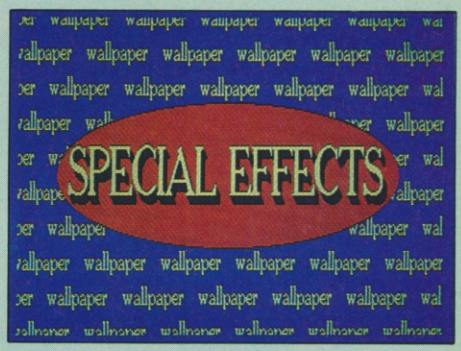

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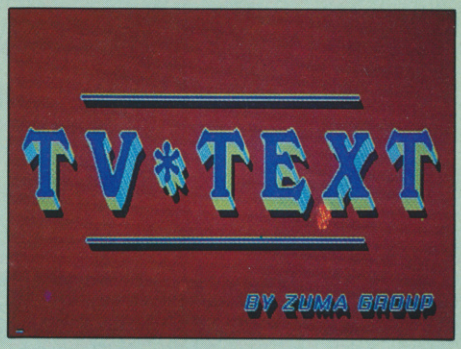

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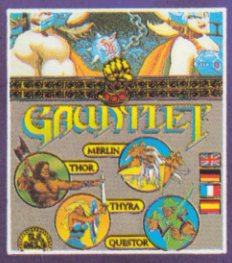

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